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EDITED BY THE SECRETARY
R. S. STURTEVANT

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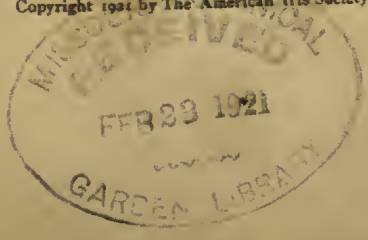

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FOREWORD

Our first Bulletin was devoted to the Culture of Irises; this, our second, you will find of a more general nature and we are most fortunate in being able to present the views of such authorities in Europe as Ernest H. Krelage, Sir Arthur Hort, and F. Denis. With generous space in The Flower Grower every month, it has seemed desirable to devote the greater part of each Bulletin to material of permanent value as a record and to publish elsewhere, matters which, perhaps, derive their chief appeal from an opportunity for open and frequent discussion. With this policy in mind, I think that you will find a surprising amount of current interest in articles which fundamentally are a matter of record for the historian or geneticist.

May this, the second year of our organization develop not only the continued interest of our 1920 members, but also add many new ones to the ranks of iris enthusiasts.

The Development of the Tall Bearded Irises in the 19th Century

Ernest H. Krelage, Haarlem, Holland

It has been repeatedly stated that the records of the earlier varieties of bearded Irises are very scarce. I will try to furnish some information which I hope will be completed by others.

The difficulty chiefly consists in the lack of information in the gardening periodicals of the period, the only sources from which a more complete knowledge could be drawn being the trade catalogues issued between 1840 and 1890, and I need not say that it is almost impossible to find a complete set of these now. Having the advantage of possessing some rather rare periodicals as well as catalogues of several Iris growers of that period, I feel it my duty to publish the facts which can be derived from these publications.

Although the existence of exact records on seed raising of Bearded Irises is unknown before the 19th century, the variability of these plants had been observed three centuries ago.

When we try to discover the origin of our present day Flag Irises, we find that the oldest (named) seedling varieties were obtained in the first part of the 19th century. Iris raising from seed, however, is much older: indeed we must go back to the year 1601 in order to find the earliest record of seedling Bearded Irises.

In 1601 Charles de l'Ecluse (Carolus Clusius) published his "Rariorum Plantarum Historia" and after having described therein not less than twenty-eight tall Bearded Irises, including I. Susiana, he remarks—"A long experience has taught me that Irises grown from seed vary in a wonderful way, just as the early and other tulips and poppies."

Iris raising from seed consequently was already known and practiced in the last years of the 16th century and has been continued for more than three centuries. It is not surprising that, when the raising of seedlings was started by French nurserymen in the 19th century, the assortment at once numbered hundreds of distinct varieties, since these irises had already produced so many variations in the foregoing centuries. Of course there was no question of systematic crossing or hybridizing in those old days, and even not in the 19th century;—the enormous improvements obtained in the last twenty years being the first results of well-considered hybridization.

The remark of Clusius, referred to above, is confirmed by a contemporary. A few years later in 1608, Francois Van Ravelingen of the renown "Plantin" printers and publishers firm, published an enlarged edition in the Dutch language of the celebrated Herbal or "Guydtboeck" of Rembert Dodoens (Dodonaeus) who died in 1585. This edition contains numerous additions obtained from the works of Clusius, but also many remarks of an entirely new character. In a postscript to the 8th book in which the irises are described, a very extensive record is given of seedlings of the bearded forms. It is too long to be translated **in extenso**, but it seems remarkable enough to give a short abstract, and one can only admire the minuteness of description and the accuracy of observation although the author did not know anything about

the sexual apparatus of the flower and did not use our terms for the various parts.

With a reference to Clusius' remark on the variability of irises raised from seed, the "Guydtboeck" continues: "They vary in foliage, stems, flowers, roots, and flowering time, but most of all in flowers, which show more variations than one could describe or imagine."

The following is a list of the variations enumerated in the "Guydtboeck."

FOLIAGE. 1) broad and short; 2) broad and tall, ribbed and falcate; 3) the same but smaller, white and green, either striped, half, or more than half white, or partly white; 4) narrow; 5) broad, ribbed, almost one foot long; 6) a great many leaves about 1-2 inch broad; 7) purple, or light, or dark violet at the base; 8) entirely green; 9) five, six or more leaves from each bud at the root; 10) all leaves decaying and withering before winter, new leaves developing early in spring.

STEMS. 1) 18 inches high; 2) over 18 inches; 3) many, few or no side stalks; 4) thick; 5) thin; 6) stiff; 7) slender; 8) tough and hard, mostly smooth, round, green, and shining; 9) not taller than 1 ft; divided in branches; 10) still shorter but also ramified; 11) very thin and weak but very long; 12) as a rule the stem springs from the foliage; 13) sometimes the stems are separate from the leaves, especially in such varieties as lose their foliage in winter.

SPATHE VALVES. 1) all green; 2) edged violet; 3) half white, half green; 4) entirely white, or with white spots on one side; 5) pale green or yellow, especially when growing older.

FLOWERS. 1) two, three or four together, originating from the spathe-valves, flowering in succession: 2) a great many flowers; 3) one flower only; 4) large; 5) smaller; 6) odor of hawthorn; 7) scentless; 8) almost scentless; 9) Sambucus (elder-berry) odor, often very strong and unpleasant; 10) very sweet Lily-of-the-Valley odor; 11) rather similar but not so sweet though pleasanter than the hawthorn.

The variations in the form and the color of the flowers are innumerable and almost incomprehensible.

FALLS. 1) bluish on the blade, yellowish white on the haft, marked with thick, dark violet longitudinal veins; 2) pale yellow or violet blade, marked with pale violet veins; 3) conspicuously drooping blades; 4) marked with two colors; 5) marked with a long vein of another color; 6) pale ash color with thick violet veining and deep violet blades; 7) pure white, on the haft pale with violet rays; 8) pale white with violet stripes, or blotched violet; 9) pale lilac; 10) dull lilac; 11) deep violet with clear, or dark, or dull rays, or veins; 12) broad in all parts; 13) narrow in all parts; 14) blade broad, hafts narrow; 15) haft white with white stripes, blade entirely violet; 16) entirely violet blue or snow white; 17) blue or purple with white stripes, or white with violet stripes; 18) yellowish white with golden yellow veins.

BEARD. 1) white with yellow tips; 2) yellow; 3) yellow with violet tips; 4) white; 5) bluish; 6) where covered by the crest, white where not covered, yellow; 7) beard as long as the fall; 8) as a rule not longer than half the fall.

CRESTS. (evidently style-branches are understood. Ed.) 1) yellowish white; 2) purple and yellow; 3) yellow and violet; 4) violet stripe in center; 5) spotted brown; 6) pale, mottled with dark spots; 7) yellow; 8) pale yellow; 9) whitish; 10) dull yellow and sooty color; 11) light blue; 12) deep violet; 13) entirely white with pale crest; 14) whitish with violet crest; 15) broad; 16) very narrow; 17) so narrow that they do not cover the beard.

STANDARDS. 1) blue; 2) violet; 3) white; 4) pale yellow; 5) dull vio-

let; 6) vivid violet; 7) deep violet; 8) violet blue; 9) bluish white; 10) yellow with veins of violet, blue, or other colors at the base; 11) half violet, half yellow, at the base yellowish with purple veins; 12) mottled brown; 13) mottled red; 14) mottled sooty colors; 15) mottled violet at the base and in the centre; 16) yellow with violet stripes; 17) very narrow at the base and broad at the blade, marked with purple; 18) pure white with purple lines; 19) pale with violet stripes; 20) standards touch each others' tips.

FLOWERING TIME. 1) May, exceptionally in late April; 2) June; 3) flowering twice—May or June and November. Sometimes they flower the first year after sowing, sometimes the second year or many years later.

SEEDS. 1) Like a small pea; 2) like a rather large pea, ribbed; 3) grey, or brown, or yellowish. Some varieties almost never produce seed.

ROOTS. 1) outside yellowish or grey, inside white; 2) with pleasant smell as the Iris of Florence (orris root); 3) with smell like Valerian; 4) first unpleasing, later a sharp taste; 5) when green unpleasant smelling, but sweet when dried; at first without taste, afterwards sharp.

Van Ravelingen concludes: "We have recorded all these variations more as a guide to amateurs in the knowledge of these plants, than with the object of describing them all by words for this would be impossible, for nature is never tired of producing things strange or wonderful to men, as is more than proved not only by these, but by innumerable other flowers and plants."

If we imagine the endless combinations which these variations permit, we get the impression that almost the same number of irises were known in 1600 as three centuries later, the main difference being that, in 1600, they were not propagated from the roots nor known under varietal names. Whether the quality of the 19th century ones is greater than that of the older forms cannot be stated.

Reference to iris raising from seed has often been made in later works of the 17th and 18th centuries. I give here, only a few extracts which seem to be original observations not taken from older books.

In 1632 Petrus Lauremberg in his "Apparatus plantariüs primus," when speaking of non-bulbous irises, stated it to be very remarkable that plants grown from seed not only are not always identical with their parents, as far as colour, foliage and stem are concerned, but also result in variations impossible to describe. Nobody, he says, could easily determine with such varieties.

Thirty years later J. S. Elszholz in his work Vom Gartenbaw (1666) also described how irises may be raised from seed, adding:—"They almost never are like their parents, but vary manifold and wonderfully."

The same, or similar remarks, can be found in the works of several later authors, such as Ph. Miller, who described a few Flag Irises which he had found constantly the same as to flowers as the parent plants, but also adds that "There are several varieties of these Flag, or Sword-leaved Irises which chiefly differ in the colour of their flowers, so are not to be regarded as distinct sorts."

It is shown from the above that seedlings of the tall bearded Irises had been raised for two hundred years before the first records of such raisings were published. It is also obviously very difficult, if not absolutely impossible, to state whether the raisers in the early years of the 19th century used originally true wild forms of pallida and variegata, or seedling forms.

The endless variability which showed itself as soon as a raiser like Lémon, who yearly collected and sowed as much seed as he could,

is to be explained by the fact that iris seedlings had previously been raised over so long a period.

E. von Berg (1782—1855)

The first records of iris seed raising have been published in the German botanical journal Flora of 1833 and 1835 by the amateur botanist, E. von Berg of Neuenkirchen (Mecklenburg-Strelitz). In his first article he described the species of irises he cultivated and the seedlings he obtained; in the second, he gives an additional list of seedlings and some corrections. He expressly states never to have hybridized, and suppose that all his irises have been self-fertilized, the influence of wind and insects being "against all probability" according to von Berg. This opinion, of course, cannot be right, because self-fertilization of Bearded Irises is practically impossible on account of the structure of the flower. The results recorded by von Berg are not of so much use as they might have been, had he recorded not only the mother plant, but also the pollen bearer. His results are moreover somewhat difficult to appreciate because of the uncertainty about the identity of the mother plants used.

Apart from some dwarf Bearded Irises von Berg chiefly experimented with pallida, squalens, plicata, neglecta and a few other tall Bearded Irises. Grouping his seedlings under the mother plants from which they were derived, the list would be as follows: a short characteristic description is added to each seedling.

PALLIDA

pallida sambucina, intermediate between these two Irises, shaped like sambucina.
pallida odore sambuci—a small pallida.
sambucina flore rubello—standards isabelle colour, falls dull lilac.
squalens.
fulgida, a squalens form.

SQUALENS.

squalens minor fl luteo, dwarf squalens, standards without blue of grey.
" **variegata,** a variegata form with yellow standards, falls striped yellow and brown, with yellow border.
" **minor,** a small squalens form.
" **flavissima,** conspicuously yellow standards.
Superba, a light blue violet pallida form.
Tardiflora—a squalens form.

PLICATA

plicata aurea and **plicata variegata**—both variegata forms.

NEGLECTA

neglecta nigricans, from the description this seems to be a variegata form.

From germanica von Berg obtained three seedlings identical with the mother plant, from Swertii one identical with Swertii. Flavescens gave a seedling like variegata. A sambucina-like iris which on the authority of J. Booth he calls japonica, gave a germanica-like flower which he on account of its expanding standards, named expanda. Under the name caesia he describes a seedling from florentina or another whitish Iris, which is identical with the mother plant.

We later nowhere find any reference to von Berg's seedlings, which seem, not to have been in the hands of nurserymen, or may have proved not to be worth growing.

Whether I. Bergiana, an old variegata form of this same period and still in cultivation, had been named in honor of E. Von Berg and by whom, I cannot say.

De Bure (1842)

The first seedling iris which is often referred to in later years, was raised about 1822 by a Parisian amateur grower, Monsieur de Bure, (1842) from I. plicata. It was known as I. Buriensis* and is described as having larger flowers than plicata, a ramified stem, standards and falls white edged purplish violet.

De Bure published a very interesting account of the results of his iris seed raising in the "Annales de Flore et de Pomone" of March 1837 and in the "Annales de la Societe Royale d'Horticulture de Paris" of May of the same year. The results obtained in June 1836 from seeds saved in 1832, 33 and 34 were as follows:—

1. **Seedlings of I. squalens**—From 17 plants—12 flowered—all different, none identical with squalens: 10 had white flowers with stripes of various colours; blue, lilac, purple, etc. The two others were true variegata.

2. **Seedlings of squalens, large flowering variety.** From 32 plants 27 flowered; 11 absolutely distinct in size, habit and colour from the mother plant and from each other; white ground colour; light and deep blues, violet blues, lilacs, etc. and 16 variegata, more or less distinct from each other.

From the results 1 and 2, de Bure concludes that variegata is the type from which squalens is derived.

3. **Seedlings of versicolor vetus** (a misleading name for a now unknown bearded form) 95 plants, of which 24 flowered. Four were "versicolor" forms, twenty true variegata.

4. **Seedlings of sambucina**—only three plants out of 12 flowered and were identical with the parent.

5. **Seedlings of Variegata**—From 12 plants, 7 flowered; 4 variegata forms, 2 sambucina like, 1 pallida.

6. **Seedlings of Swertii**—From 10 plants, 6 flowered; 2 were the type, 4 were absolutely distinct in foliage, length of stem, number, shape and colour of the flowers: claret or violet lilac, violet of various shades on white ground, shades then entirely new.

7. **Seedlings of Buriensis**—(which is a plicata seedling) 404 plants, 144 flowering, none identical either with Buriensis nor plicata—17 blue on white ground in several shades, 124 **all squalen forms,** mostly varying, further **1 pallida** and **2 variegata.**

De Bure concludes that the production of pallida, variegata and squalens from seedlings originating from plicata, proves that pallida, variegata and squalens are the original types. In connection with the result mentioned in paragraph 2, the conclusion would be that only variegata and pallida are the original types, which is very remarkable as being in perfect accord with the opinion of the Iris authorities of our day.

JACQUES (1780—1866)

An eminent personality among French horticulturalists of the first part of the nineteenth century was Monsieur Jacques, head gardener of the Royal Neuilly Domain at Villers. He was one of the leading men

(*Probably our present Bariensis. Ed.)

in the new Horticultural Society of Paris where he regularly showed plants and contributed reports and information, and was one of the Editors of the "Annales de Flore et de Pomone." Jacques raised irises from seed before 1830 and was authorized to dispose of his stock which he distributed among nurserymen and amateurs. Not being in the trade he evidently did not publish catalogues, and although his Iris collection, as a whole, has often been mentioned in the horticultural press not the least indication of named varieties raised by him is now to be found.

It can only be supposed, but not stated with any exactness, that the varieties mentioned by Lémon (see below) as existing already when he started seedling raising are Jacques' seedlings. If so, he would have raised the vareties known as aurea, formosa, reticulata alba, purpurea and superba (not to be confused with the bulbous species of the same name) pallida speciosa, sambucina major and sanguinea (not the sibirica or orientalis synonym).

OLDEST BELGIAN VARIETIES

The next step was I. belgica (syn. Vanderwille) raised in Belgium about 1830, probably by the well known amateur Monsieur Parmentier, whose name is also connected with a renowned collection of seedlings of Chinese Peonies. It showed relationship with I. variegata and had light yellow standards and darker yellow falls. It was described by Jacques in the "Annales de Flore et de Pomone" of March 1833.

LÉMON

The first nurseryman who took up the Bearded Iris and tried to get a collection of seedlings for the trade was Lémon. His father, who died in 1836, had established his nursery at Belleville in 1815 and was famous as a raiser of Pelargoniums, which he made a popular market flower. He also raised seedlings of Chinese Peonies. The son continued the renowned specialities of the house and added the Iris. The Iris collection of Lémon has repeatedly been referred to in the French horticultural press of the period. The first description is to be found in the "Revue Horticole" of June 1839, where his celebrated specialties are mentioned. "M. Lémon also had a fine Iris collection" says the report "from which we mention aurea, Bergii, Buriensis, formosa, pallida speciosa, reticulata major, reticulata purpurea, reticulata superba, striata, Vanderwille."

It is remarkable that none of Lémon's own seedlings have been referred to in this report, because only one year later he published a list of a hundred named varieties of his own raising.

The "Annales de Flore et de Pomone" of September 1840 contain an article on German Irises by Lémon, in which he says:—"I have grown numerous seedlings from these Irises, and I have also obtained a large quantity of very interesting varieties, which I will publish successively, for many are worth the attention of amateurs and able to produce a very picturesque effect when appropriately planted." A list of one hundred varieties with descriptions is added, divided in three groups according to height. The best are marked with two crosses; those which are not Lémon's seedlings but older varieties, are indicated with one cross. These have already been mentioned above as probably being Jacques' seedlings.

It was well known to de Bure, Jacques and Lémon that I. germanica does not produce seeds as a rule, and the latter stated that he had used the seeds of I. plicata, sambucina, squalens, pallida, hungarica and variegata, all his seedlings flowering in the third or fourth year.

It is remarkable to observe that none of the seedlings obtained by de Bure, Jacques, or Lémon are the result of hybridization. We learn from a report by Loiseleur—Deslongchamps in the "Annales de la Societé Royale d'Horticulture de Paris" of 1845 in which various Iris collections are described (*) that Lémon was declared never to have hybridized, either irises or any other genus of plants. Mr. Loiseleur had asked him to, because "Hybridization is so very much in fashion now," but satisfied with the excellent results obtained by mere chance seed Lémon did not see that hybridization would have given better flowers, and he doubted whether he would have done better by causing himself much trouble instead of leaving it to nature. He was convinced that in order to obtain meritorious varieties it was sufficient to sow much, and above all to sow the seeds from varieties already improved. The same is reported as being the opinion of Jacques.

Lemon showed his Iris collection in 1840 and following years at the shows of the Royal Horticultural Society of Paris and had his collection often inspected by a committee from that Society. Reports have been published in the annales of the Society for 1842, 1844, and 1845. (**) The first report also contains an extract from Lémon's catalogue for 1841-42, viz: The names and descriptions of thirty-two varieties grouped into a dozen colours. All these varieties are included in the list published two years earlier in the "Annales de Flore et de Pomone." In 1842 Lémon (according to the annals of the Society for that year) added a dozen varieties to his collection and in 1845 (according to the same periodical) listed over 150 varieties, all distinct.

The original collection of Lémon as first described in 1840 is composed of the following varieties, being his own seedlings in alphabetical order:

Adonis	Calypso	Honorabile
Agathe	Cameleon	Hymenie
Albion	Cassiope	Iago
Amabilis	Cassius	Idion
Amanda	Cerbere	Imogene
Amelie	Cleopatre	Incomparable
Antinous	Conqueror	Indiana
Antiope	Cornelie	Jacquesiana
Apollo	Diomede	Julia Grisi
Arlequin malinais	Don Carlos	Lelieur
Arquinto	Donna Maria	Libaudi
Augustissima	Duc d' York	Lord Grey
Augustus	Edina	Lorenzo
Aurora	Fenelon	Magnet
Bigotini	Fries Morel	Marcus Aurelius
Boccage	Fulgorie	Memnon
Boismilon (M. de)	Hector	Minerva

(*) Other Iris collections were those of Bacot, rue d'Allemagne a la Petite Villette, smaller than Lemon's and not started before 1841, and Pele, rue de Lourcine, Paris, who started his collection in the same year. Named varieties of either of these growers are mentioned nowhere, as far as known.

(**) A Paris correspondent of the Gardener's Chronicle of London referred to the new Iris varieties of French origin in letters, which have been published in Vol. I (1841) Page 382 and 11 (1842) page 590. It seems not surprising to suppose that John Salter was the correspondent. He does not mention the name of the raisers, but chiefly refers to Lemon's varieties. In 1841 his list contains some of the oldest forms and a number of Lemon's seedlings, in 1842 exclusively Lemon's seedlings with three exceptions, viz: Durasque, Dusouiget and Mademoiselle Dubarry. It is quite possible that these also belong to Lemon's seedlings, although we do not find them mentioned in any publication. These three varieties seem never to have been heard of again.

Minos
Morphee
Multicolor
Munico
Nanette
National
Orpheus
Paganini
Pharaon
Phidias
Phoenix
Pluton
Pulcherrima
Raphael
Rebecca
Rollandiana
Romeo
Samson
Sapho
Spectabilis
Sultane
Tarquin
Telemaque
Theresita
Thyphee
Titus
Turenne
Ulysse
Unique
Variegata Major
Victorine
Virgile
Zephir

In July 1842 the "Annales de Flore et de Pomone" had another paper on irises with a coloured plate of the varieties De Boismilon, Jacquesiana, Conqueror, Madame Rousselon and Madame Lémon, the two latter not being given in the previous list.

The next additions to Lémon's assortment are published in the "Journal d'Horticulture Pratique"(Brussels), of August 1844. Here we find the original and authentic description of the celebrated Madame Chéreau, dedicated to the wife of the president, Circle général d'Horticulture in Paris. At the same time another of Lémon's seedlings was called Monsieur Chereau.

In 1848 the "Portefeuille des Horticultures" published another coloured plate of the varieties Sylphide, Idion, Duchesse de Nemours, Monsieur Poiteau, Neala and Paquita. The accompanying text gives a selection of some varieties, including the following which were not mentioned in the list of 1840.

Agenor
Aixa
Aspasie
Bougainville
Chereau (Madame)
" (Monsieur)
Creme et violet
Duchesse de Nemours
Duchesse d'Orleans
Eugene Sue
Emma
Gisele
Gracieuse
Hericartiana
Isaure
Leseble (Monsieur)
Marie Amelie
Marie Stuart
Miralba
Mecenes
Othello
Pactol (Le)
Picta
Poiteau (Monsieur)
Proserpine
Reine des Belges
Victoire Lémon
Topaze
Walneriana

Descriptive lists of German Irises were not customary in the catalogues of that period. Most firms only offered assortments without giving lists of named varieties. An exception was the firm of Louis Van Houtte at Ghent (Belgium) who for the first time gave a list of varieties in his catalogue No. 53 for 1854-5. It contains a number of well known varieties of Lémon and 44 others which may also be Lémon's seedlings. Van Houtte does not state that he raised any of these irises himself, for the series is recommended in the following terms:—"The collection which I offer to amateurs contains all the best and newest things that have appeared in this section till now."

The following varieties are mentioned here for the first time as far as I can see.

Two varieties, viz: Hebe and Innocenza are stated to be Lémon's seedlings in the Verdier catalogues of 1858 (see below)

Agnes Sorel
Bellona
Bleu de Ciel
Candide
Comte de St. Clair
Countesse Potocki
Dr. Sangrado
Haydee
Hebe
Icarus
Indigo
Innocenza
Jenny Lind
Lady Seymour
Lady Stanhope
La manola
La mamora
La marquise

La seduisante	Ma tante Aurore	Preciosa
La tendresse	Mentor	Princesse Mathilde
La tristesse	Montrosa	Sanssouci
Lilacina	Mozart	Severe
Lord Auckland	Ockermanni	Squanarelle
Madame Sonntag	Pancrace	Sydonie
Maria Milanello	Phaeton	Sylvie
Maria Theresia	Picciola	Theophile
Marlborough	Pirzio	

Van Houtte also offers a variety called Vauderwille, which evidently is a corruption of Vandewille (syn. for I. Belgica) a first example of the endless corruption of Lémon's and other names up to the present day.

In later years Van Houtte offered some varieties which I have not found in earlier publications of other firms. I cannot state whether these varieties are seedlings of Van Houtte's or of other raisers;—

Alcyone 1864	Cytheree 1869	Liabaud 1867-Libaudi
Augustina 1870	Gedeon 1864	Linnee 1859
Bariensis 1877-burien-sis?	Golconda 1864	Multiflore 1860
	Hericant de Thury 1870	Muta 1873
Belisaire 1862	Hortense 1867	Olinda 1864
Britannicus 1864	Jordaens 1862	Oscar 1864
Chenedolle 1872	Judith 1867	Venus 1870
Comte de St. Priest 1859	Jules Caesar 1867	Vauban 1859
	Leopoldine 1869	

The Lémon collection is offered under his name as raiser in the catalogues of the two Verdiers (Victor Verdier later succeeded by his son Charles and Eugene Verdier, who had a business on his own account) who in 1858-59 both listed exactly the same varieties, including the following which are not to be found in previous lists:

Alice	Erigone	Marjolin
Alvares	Ganymede	Pajol
Alzire	Gloriette	Psyche
Ariane	Gonsalve	Rigolette
Azur	Irma	Salomon
Bougere	Juliette	Simile
Catinat	Lavinie	Soliman
Chloris	Le Vésuve	Thetis
Ciceron	Louis van Houtte	Van Geertii
Clara	Louise Desavisse	Virginie
Coelestis	Mainsart	Vitellina
Duc de Cazes	Malvina	Walter Scott

The catalogues for 1860-'61 of Eugene Verdier again contains some new names and the addition "Collection Lémon" has now been dropped. The new comers are:—

Arlequin	Hippolyte Pernet	Madame Modiste
Belladona	Julie Menier	" Thibault
Belle Hortense	Madame Chauvieré	" Truffaut
Bossuet	" Guerville	President Morel
Comtesse de Courcy	" Jenneaux	Violacea Grandiflora
Duchesse d'Orleans (M)	" Louesse	

It cannot be fixed whether all these varieties are seedlings of Lemon; Duchesse d'Orleans (M) certainly not, for the addition (M) means a distinction from the Lémon variety of the same name. M. may refer to Modeste Guerin, who is also mentioned as a raiser of irises in this period, although I cannot find any record of his varieties. Victor Verdier also raised seedlings and so did the firm of Bossin-

Louesse et Cie. The catalogues of the two Verdier firms do not give any information about their own seedlings.

In 1863 Charles Verdier, who succeeded his father, Victor, added to the list:—

Acteon	Crépuscule	Neptune
Athlete	Madame Bindet	Mion de l'Enclos
Clio	Madame de Guessart	Vierge Marie

Comtesse de Courcy is now called Madame la Comtesse de Courcy, Madame Jenneaux being evidently the same as Madame Jouneau. The list as completed in 1863 is to be found in Charles Verdier's catalogues almost uninterruptedly during more than twenty years.

We now lose further trace of Lémon's varieties and probably he did not raise any more. His work, meanwhile, was continued by others. During half a century his varieties have been the nucleus of all collections of tall Bearded Irises, and even in our day are still excellent. Jacquesiana, rightly named in honor of Jacques (and therefore not Jacquiniana as it is so often erroneously called) was among his first seedlings introduced in 1840, Madame Chéreau being offered four years later for the first time.

Lémon died in 1895 after having retired from business many years before.

JOHN SALTER (1798-1879)

New additions to the list of varieties came between 1850 and 60 from John Salter of Hammersmith. I only possess his catalogues of 1868 and 1869. Ten years earlier, in 1859, the "Floricultural Cabinet" published a list of German Irises with descriptions. The article is not signed, but it was evidently sent in by Salter, or compiled from his catalogue, for the only raiser's name added to some varieties is his. Salter established himself as a nurseryman in France in 1838 where he remained until 1848, when he settled in England. In 1869 he retired from business, his grounds being sold for railway extension. Salter was a renowned raiser of Chrysanthemums and Pyrethrums and owing to his connection with French and English colleagues, introduced the English novelties in France and later the French ones in England. This explains why he took up the raising of herbaceous irises, starting with Lémon's varieties. We find several new names in the three lists referred to above, some with the addition of Salter's name as a raiser, others where his name is doubtless added erroneously i. e. Albion (Salter) must be Lémon's variety of this name offered in 1848: Ignacite, Julia Grisi, Magnet, Orpheus and Psyche are all typical names of Lémon, and it is scarcely to be expected that Salter used these names of varieties which were then known standard varieties, for new seedlings of his own.

The list of the "Floricultural Cabinet" (1859) contains the following names, not previously mentioned. (S) means raised by Salter, the origin of the other varieties being unknown, altho they may also be Salter's seedlings:

Abou Hassan (S)	Atroviolacea	Duchess of Argyl
Alboni (S)	Barbara	Elfrida (S)
Alexandrina (S)	Captivator (S)	Emma Dale
Alonzo	Cerito	Fairy Queen (S)
Annette	Delecta	Gabrielle d'Estrees
Annie Jane	Diadem (S)	Guido
Ahasuerus—Assuerus	Duc de Brabant (S)	Indian Queen
Astarte	Duchess of Sutherland	Imperatrice Eugénie

Lady Franklin
Lord Palmerston
Louisa (if not Louise Desavisse)
Madame Debura
Mermaid
Queen Victoria (S)
Queen of Beauties
Queen of May (S)
Milton (S)
Miss Nightingale
Modesta
Morelli
Mr. Broom (S)
Mexicana (S)
Penelope (S)
Prince of Wales (S)
" " May (S)
Sultan (S)
Versailleuse
Victory
Walner
Zoe

Salter's catalogues of 1868 and 1869, the only ones before me, have a few varieties not mentioned above, viz:

Coquette
Delight
Galatea
Gil Blas
Guy of Warwick
Jacqueline
Justinian
Lady Jane
Mademoiselle Patti
Nell Gwynne
Ossian
Prince Alfred
Racine
Princess Beatrice
Sceptre
Souvenir
Thalia

The names seem to indicate that some of the above are French varieties, but this cannot be ascertained for the moment.

Later catalogues of Salter's are unknown, and have evidently not been published.

1870—1900

During the following period the interest in herbaceous irises seemed to decline. The French horticultural papers do not refer to herbaceous irises at all until 1905 and the catalogues do not announce any new variety. Meanwhile the nomenclature became seriously confused. The French names were arbitrarily changed and modified by nurserymen in other countries who did not know the right spelling, or remember the history of the names. The interest not being keen enough to justify any study of nomenclature, most nurserymen sold their assortments of German Irises under numbers, or names of their own invention. When in 1892 I revised my firm's extensive collection of herbaceous irises, after having completed it from various sources, I verified the varieties with the authentic descriptions of Lémon, Salter and the others raisers and found several synonyms for almost every variety.

The only country where new varieties of tall Bearded Irises were being produced from time to time was England. From 1873—1880 extensive descriptive lists in the style of Salter were yearly published in the catalogues of Robert Parker of Tooting (Surrey), who evidently was the raiser of Cordelia, Darius, Enchantress and Exquisite.

About 1873 Peter Barr (then of Barr & Sugden, later Barr & Sons) completed his Iris collection and arranged the varieties for the first time in groups (aphylla, amoena, neglecta, pallida, squalens and variegata). A descriptive list of this collection was given in "The Garden" of August 29, 1974, and later again in the "Florist and Pomologist" of December 1884. Besides a great many varieties already referred to above, Mr. Barr's catalogues contained some new names, but no indication is given that these varieties were raised at his nurseries. The still existing firms who have raised Irises doubtless possess better records of their own productions than any outsider, and I therefore hope that such firms will complete my notes.

The period of 1870—1900 is characterized by a few excellent new varieties which are a decided improvement on those of the former decade. I refer to Cordelia and Darius (both of Parker) already mentioned, to Gracchus (Ware 1887) Mrs. Darwin (Barr 1893) Robert Burns (Barr 1885) and Black Prince (Perry 1900) Maori King (Ware 1890).

In the 20th Century

Everybody now knows that an entirely new period in Iris raising has been opened by the introduction of the large flowering wild forms I. Ricardi and I. Trojana (the latter having been introduced and distributed by Leichtlin since 1888). These facts mark a revival along the whole line.

Whether Eugéne Verdier in his latest period already used these large flowering forms, cannot be stated. His collection after his death in 1902 came into the hands of Messieurs Vilmorin, Andrieux et Cie, whose splendid new varieties leave the older forms far behind. Other successful French raisers are MM. Millett et fils, an amateur grower M.Denis and MM. Cayeux et Le Clerc.

In England the pioneer hybridizer, Sir Michael Foster, was followed by Messrs. Caparne, Yeld, Perry, Bliss, Dykes, Sir Arthur Hort and others, while America has taken up the raising of seedlings and the culture of the Iris in general with truly American energy.

In Germany the name of Goos & Koenemann is associated with several novelties.

It is however, not the object of the present paper to deal with the present state of affairs, but to honor the Iris raisers of the past whose work was the foundation for the present development.

The keen interest in Irises of the present day has led to serious research of the work of the old raisers. Any study of this kind must start from the original lists of varieties which I have produced in this paper. In these lists we find the exact names of the original seedlings, their authentic naming, in the only right spelling.

That the early raisers' work is worth some appreciation and attention is best proved by the fact that such old varieties as Jacquesiana (Lémon 1840) and Madame Chéreau (Lémon 1844) after three quarters of a century are still among the leading varieties in every collection and that even now the latter is being recommended in terms such as these: "If new it would create a sensation."

It really cannot be said of many garden forms of popular plants that they have kept their reputation for so long a period.

October, 1920.

Sir Michael Foster and his Irises

Sir Arthur Hort, England.

Sir Michael Foster is justly looked up to as the pioneer and founder of the modern cult and cultivation of the iris.

Now that the cult is becoming widely spread on both sides of the Atlantic, some recollections of my old friend and of his garden may be found, I think, of interest. I was a frequent visitor in his later years to the place which, if he were now alive, would be a Mecca to gardeners even more than it was then. It has long been a subject of wonder to me that so many English people genuinely interested in their gardens have been hitherto content practically to ignore this fascinating genus of plants. "Irises, O yes," a lady once said to me, "they fill up nicely, don't they?" And again and again I have heard the complaint that "irises are so soon over", whereas with but reasonable attention, the garden should not be without iris flowers for more than three or four months of the year. Can the same be said of any other genus?

My own plot of ground is not well suited for the more exacting kinds, and unguicularis rarely enlivens my winters, as it does those of many of my friends: yet, even if that has failed, my season begins about January 15th, with histriodes, and thence-forward there is no break till well into July: while those who grow Kaempferi can carry on another month, and in September and October various kinds sometimes bloom spasmodically e. g. ruthenica is as likely with me to flower in autumn as in spring, and I have had good spikes of Delavayi in October.

Foster was Professor of Physiology in the University of Cambridge, and at one time represented the University in Parliament. Gardening was his relaxation, and, though irises came first in his affections, he had plenty of other interesting things in his garden. He grew eremuri by hundreds and raised various interesting hybrids: he experimented in like manner with tritonias: his Ostrowskya magnifica was indeed magnificent. I recall also his gentians, his long-spurred columbines, and isolated splendors such as habranthus pratensis, to say nothing of the ordinary plenishing of a good garden. I can only speak of what I saw, and my visits were all at about the same time of the year. In reviving these rather fragmentary reminiscences I may perhaps be pardoned if I interpose without further apology some jottings of my own amateurish experience, seeing that the plants which he gave me were the foundation of my own little collection, and that I have flattered myself with thinking that I have in a small way tried to practice what he taught me.

Shelford, near which village Foster lived, is about three miles from Cambridge. His house "Ninewells" was built near the top of a chalk hill, and he used to speak of his "bleak eastern counties garden". But shrubs had been cunningly planted to mitigate the winds, and it always struck me that the place was full of sun: I know that I used to marvel to find him, when old and not in robust health, hard at work in the blaze of a June afternoon. A large portion of the ground was on a steep slope, securing good drainage, while most irises surely show to best advantage on a slope. The grounds included an unusual feature in the shape of a disused chalk-pit, a grand opportunity for the unconventional gardener; the bottom was comparatively moist and grew well such irises as aurea, Monnieri, spuria and ochroleuca: the sides

were left wild, but among the thin grasses and ordinary chalk-down plants were sown columbines and pinks, which gave something of the effect of a steep alpine meadow. The soil, as has been indicated, is admirably adapted for a large proportion of the genus Iris, and Foster admirably adapted for a large proportion of the genus Iris, and Foster saw at Shelford no Iris Kaempferi, and I am not sure that the owner of the garden greatly regretted the omission. He used, like many gardeners, to speak depreciatingly of his soil, which was indeed by nature doubtless poor and thin, but had been well tended and, above all, "manured with brains". When people, seeing his flowers asked him what was the nature of the soil whose effects seemed to them miraculous, he used to tell them gravely that a certain friend from Cambridge, a man of colossal stature with feet in proportion, often walked out across country to see him and was good enough to leave behind him what fell from his boots. When he gave me plants, he always carefully shook all the earth off the roots, saying, "You can have as many of my plants as you like, but I can't spare you any of my soil!" That was one of the humorous conditions of his splendid generosity: the only other was that, if a friend wanted plants, he must come and fetch them,—surely a most reasonable stipulation and one which ought always to be made,—except perhaps by men with unlimited time and labour at their disposal. Accordingly for some years I used to spend a happy holiday in June at "Ninewells" and stagger down to the station in the evening with the sack which he had instructed me to bring with me.

He used to assert that my visits were good for his garden, since, while I dug up, labelled, and packed rhizomes, he would do a bit of weeding in the neighborhood. He was not a rich man and he employed little labour so that weeds certainly abounded, though I do not recall any of the more noxious and rampant things, such as infect my own patch. However, every gardener probably thinks that his own weeds are stronger and more vicious than those of other people.

Of Foster's work on irises I cannot pretend to give a full or methodical account. Mr. Dykes' great monograph is a fitting tribute to our common master's memory: as Mr. Dykes himself would be the first to allow, such a book could not have been attempted without the labours of the leader to whose memory it is dedicated. But, though Foster's name is prominent throughout the book, a few gleanings of a more personal character may be acceptable to lovers of the genus, and may even help them to appreciate what they owe to one who through his hobby has added so much to the stock of innocent human pleasure.

What struck me most on my first visit to Shelford was that here were irises in profusion, but nearly all of them unfamiliar. This might well be the case, since, broadly speaking, Sir Michael's work on the genus had been of two kinds, the collection of wild forms mostly new to cultivation, and the raising from these of new forms by hybridising or crossing. Thus his collection was in a special way his own: he kept but a small corner for what he called "trade things," viz: new garden forms which had been sent to him. He had little opportunity of collecting for himself, but he let his hobby get widely known, and travellers of all kinds, especially perhaps missionaries, sent him bulbs and rhizomes. His monograph on Bulbous Irises contains frequent mention of American missionaries in the middle East.

I do not know how he got in touch with such persons, but his correspondence of this kind must have been considerable and have extended over many years. As the plants thus acquired matured in his garden, he described them and worked out their affinities. Beyond these occasional descriptions he did not print many of his conclusions,

nor, as far as I know, did he contemplate any great treatise on the genus. He took many notes, unfortunately by methods which made it difficult for anyone else to make much of them. There is a lecture of his on the origin of the tall bearded irises of gardens, but his only complete account in print of any section of the genus is his admirable little "Bulbous Irises," published by the Royal Horticultural Society. This booklet describes fully with plates every bulbous iris then known, and classifies them as "Reticulata group," "Juno group" etc. I fancy that the number of known bulbous species has not since been much increased. Indeed some of those described are still very scarce: few seem to cultivate that etheral beauty Bakeriana, and I have never met anyone who had ever seen Kolpakowskyana. I never saw Foster's early bulbous irises in flower, as my visits were always in May or June: but I remember the pride with which I bore away bulbs of the then new bucharica, their curious brittle roots carefully packed in a paper bag. But neither the Junos, tall or short, nor the rarer reticulatas are, I fear, for me, nor yet Boissieri, nor tingitana, nor filifolia, nor juncea: while as for Grant-Duffii, I think Foster told me he had grown it for 20 years without seeing the flowers. Iris sisyrinchium I do not think I had from him, but I have seen it growing between the stone seats of the ancient Greek theatre at Taormina where it gets a roasting such as few English gardens can offer, and recently I was given bulbs collected by an English officer in Mesopotamia, which flowered in November and then disappeared! In his pamphlet Foster recommends those who do not care for the strangely fugitive little flower (which is only open for three hours) to eat the bulb. That it is edible is shown by its old English name "Barbary nut." which occurs as early as Parkinson: the plant is described by Theophrastus (about 300 B. C.), who mentions that the "root" is edible: the ancient Greeks seem to have tried every kind of vegetable food.

Foster found the soil of his chalk hill not moist enough to grow xiphioides well, and pointed out that the same garden was not likely to suit both xiphium and xiphioides. The latter indeed in a moist Scotch garden attains to a height and splendour which makes it almost unrecognisable. It is in its wild state a pasture plant: in April I have seen rich well watered meadows in the Pyrenees full of its young shoots. I was curious to see what the wild type was like as compared with the rather over-cultivated looking confections which one often sees under the name "English Irises" (the humorous history of this curious misnomer is well known): from a few bulbs which I dug up I have had a superb peacock blue, a delicate mauve, and a fine white, and, content with these, I could dispense with the countless named varieties of catalogues.

Most English gardeners have, I believe, practically given up the expensive attempt to grapple with the oncocyclus group, though in some few favoured spots Susiana is reputed to grow "like a weed". In fact, considering the amount of fuss which these elusive marvels seem to require, it is perhaps best that they should not be exterminated from their Syrian wilds only to languish and die in Western gardens. When I first visited Shelford, Foster still grew a good many of these wayward beauties, which, as Stevenson said of children, seem "almost too good to be true". But he gave me fair warning (in vain, I fear) against this extravagant form of "iritis", and he was himself at this time, I think, no longer hopeful of real success with the tribe, but was learning to console himself for their evanescence by his remarkable successes in crossing them with irises of the nearly allied but less exacting Regelia group from Turkestan. The hybrid race thus produced retained to some extent the size and marvellous colour combinations

of the "cushion" irises, but had, like the Regelias, the advantage of bearing two flowers on the stem. The beds of these hybrids, especially with a low evening sun athwart them, were certainly a wonderful sight. Similar hybrids raised by Mr. van Tubergen (Charon', 'Isis', 'Artemis' etc.,) have since become well known. After Sir Michael's death his widow gave 'the oncocylus hybrids' to Miss Willmott as being more likely than anyone else to care for them duly and keep them up: I am unable to say if she was successful, but I saw at Warley Place the trouble which had been taken to give them due consideration.

The Regelias themselves flourished exceedingly at Shelford: Foster gave me plants of Darwasica, (Suwarowi), Stolonifera, (Leichtlini or vaga) and the best forms of Korolkowi. The first named of these has, I think,, disappeared, not deeply regretted, but the others, to which I have added one or two seedling forms and the glorious new Hoogeana, give no particular trouble. I replant them and renew the soil about every fourth year: but I do not lift them annually: it involves less labour to put a light over them from June to October. Of course they must have a good hot place and a very limy soil. After a cold summer I do not expect much, but in a good season I get about 50 to 60 spikes in a space 8 feet by 3, and the form of Korolkowi known as Leichtliniana astonishes me afresh whenever I see it. I have raised two rather striking seedlings from this plant crossed with a reddish pallida, which (when they bloom at all), produce about 6 flowers of strange dusky hues on a tall rather ungainly branching stem. Some of Foster's hybrids of similar origin, viz., oncocyclus irises crossed with pallida and others of the tall bearded class are well-known. I had from him many of these, mostly seeded from iberica or paradoxa: most of them grow willingly enough, but they seem very shy bloomers, except the really floriferous parsam, which has the characteristic horizontal strap-like falls of paradoxa and the "cushion" beard, as also have the more richly coloured parpall seedlings. Hamadan and Lady Lilford, Lupceng too had a strange charm, ibvar, some one said, was like a toad, ibtroy I had for many years, but never yet saw its flower. Foster was generally content with these hybrid names but, in order to distinguish his many results of crossing these Persian irises with pallida etc., he got the Cambridge Professor of Persian to suggest names out of Hafiz, the Persian poet. Hence the fantastic Dilkush, etc. Being asked once what one of these names meant, he said with a dry chuckle, "Oh! Pride o'my eye, or something of the sort". I once ventured to propose to Mr. Dykes that this class of hybrids might be conveniently known as 'the Hafiz irises'.

Foster did not in general seem to care to give fancy names to his creations: indeed I do not remember that he himself named any more of his seedlings, except a few which he called after lady friends, as Mrs. Horace Darwin, Mrs. George Darwin, Mrs. Alan Gray (first given me as 'a pink pallida'). Miss Willmott (first given me as 'Kashmirid', being a seedling of Kashmiriana) and Caterina (called from the Queen of Cyprus). The mention of these brings me to the great group of what used to be absurdly called 'German irises'. 'Miss Willmott' has hardly fulfilled its first promise: it is a grandly built flower, and when I first had it, was practically pure creamy white except for handsome veinings at the base of the fall. But the plant is a rather uncertain doer* and recently the flower has shown signs of 'breaking', being sometimes streaked with purple: I have known florentina to exhibit similar streaks. However, I have recently raised a seedling

*Having written this I find that this year my plants seem to be in robust health and shew more flower-spikes than ever before!

(Blanch) from a big purple iris (bought as cypriana, but probably not the true species), pollinated from Miss Willmott, and this I dare to hope may turn out an improvement on the pollen-parent. Blanch is 3 1-2 feet high, is, so far at least, quite pure creamy white and is a good doer. (The name, I may add, is only accidentally significant. I have named those of my seedlings which seemed to my vanity to deserve a name from Shakespeare's female characters, taken just as they came. Last year I exhausted the list and had to begin on Shakespeare's men.) Miss Willmott had already been superseded by another Kashmiriana seedling of Foster's 'Kashmir White', which became known, I think, only after his death. It has a smaller flower, but is a noble plant, and very floriferous. This alongside of Blanch and albicans 'Syracuse' (of which more anon) I grow against an old red brick wall, which shows up their blooms in succession: a massive white flower seems to want a dark background.

Foster's object in intercrossing the tall bearded irises was in part at least, scientific: among his countless seedlings appeared many forms which were indistinguishable from forms long known in gardens and in some cases wrongly dignified with specific names. Much still remains to be done in this direction: thus the origin of the so-called germanica typica is still a mystery. It rarely bears seed in England: I have however gathered an occasional pod, and I have raised three seedlings (from naturally fertilised seed) all of which are more or less dwarf and all quite distinct: one I should guess to be due to pollen of Amas, and one (Lady Capulet) is a rich self-coloured dark purple. By his experiments Foster reduced the number of species from which all the multitudinous tall bearded hybrids then known in gardens are presumably derived to three, not reckoning germanica among these parental species, for the reason given above. The three were pallida, variegata, sambucina. Mr. Dykes has made it probable that sambucina should be cut out of the list, and has distinguished Cengialti from pallida.

Germanica was already known in various forms, blue-purple, red-purple, and white (florentina), brought chiefly from the South of France, the best known besides the so-called typica, being Purple King and Fontarabie (sometimes misleadingly called asiatica). Foster enriched this group with several eastern forms, two of which he called from the habitats from which they were sent to him, Amas and Siwas—from Amasia and Siwasia, two districts of Northeastern Asia Minor. From Armenia came Kharput. None of these seem to seed freely, at least in England, but Mr. Dykes has raised plants (dwarfs like the progeny of germanica typica), from uncrossed seed of Kharput. I have a fine dark seedling of Amas, called Ursula, and have other unflowered seedlings. The pollen of Amas, put onto Trojana has given me a whole tribe of handsome tricolor forms, differing chiefly in size of flower, breadth of contrast between standard and fall, and richness of Trojana markings in the fall. Similarly, the pollen of Purple King used on Ricardi has produced some notable giants: otherwise I find that Purple King hardly "pays rent", being as rampant a grower as it is shy in flowering: wherefore I prefer the closely similar Kochii for decoration and a small form called australis. Siwas I have also found shy, and am not even sure if I have it still. Some years ago I pinched a bit of rhizome which was running over a cottage garden wall in a remote Pyrenean village, and it has developed into an improved Kharput, with better foliage and stiffer stems. I have also collected in the South of France what seems to me an extra good form of Fontarabie; and in that region one sees a considerable variety of germanica forms in railway stations, on the rocks near towns, etc. It would be interesting

to know if anyone has ever seen any form of germanica undoubtedly wild in Europe. But this leads into a long story.

Foster's collected pallida forms are very numerous: he shewed me once a bed of thirty arranged in order of stature and exhibiting what he called ' The degeneration of pallida'. I value very highly his gifts in this class, since the different forms and their seedlings, though not otherwise very distinct, differ widely in freedom and in time of flowering. Thus he gave me a superb 'early pallida' of dalmatica type, and I now have a seedling labelled "earliest pallida', which this year (1920) was in bud before the end of March! Then he had not only lavender but 'red' pallidas, whose plum colored tint is valuable for crossing. Two of his gifts in this line have names which have always puzzled me: mandraliscae, which is of very distinct shape, with almost horizontal falls, giving a clematis-like appearance to the flower, and pavambra, which I thought he said came from Sicily; but I searched maps in vain when I was in that island. Both have proved valuable for seeding; the same pod of an ordinary pallida, crossed with mandraliscae, gave me Hero and Miranda, the latter of which is now in commerce and in the gardens of many friends: both have the characteristic mandraliscae shape, but are far more robust.

I fear that this paper grows more egotistical, but I am rather anxious to give my little experience for what it is worth, in the hope that I may thus succeed in indicating to others some of the most profitable stocks from which to breed. Thus, to take the second of Foster's parental three, it is worth any gardener's while to get hold, if he can, of the wild variegata, which he gave me long ago, and which, as it is a rather insignificant little dwarf, I did not at first treat with due respect. It has indeed all the characteristics of gaudy garden variegatas, such as Maori King and Chelles, but in subdued shades. However I saved a pod of its seed (uncrossed), and last year gathered from the colony thus raised a handful of half a dozen distinct things, mostly yellow and brown, and one at least of these as good, I thought, as Maori King, while one might have passed for an almost typical neglecta, being without a suspicion of variegata colouring. And, if variegata is a good seeder, sambucina (if there is any such thing) has undoubtedly useful pollen: it is responsible, for instance, for the colouring of Queen of May, and in the next generation of Mrs. Alan Gray. From the first of these (uncrossed) I have raised several more or less pink seedlings, some of which have a far more satisfactory habit, if smaller flowers, than Queen of May. Here I may in parenthesis remark that, especially if one has no time for pollinating (as was my own case during the war years, when I had to turn my attention to potatoes and cabbages), it is well worth while to sow seed of good garden hybrids and see what the next generation produces. Thus Queen of May often throws up, in my garden at least, monstrous flowers with 4 to 6 segments, but her children have always so far been normal except one which had no idea how to carry its flowers and went on to the rubbish-heap. Of course if the bees are to do the hybridizer's work for him a number of good parental forms must be grown near together. and one must be content to guess at parentage. Indeed I must admit that in this matter my own practice has never been properly scientific, since I am content to tie an inconspicuous label to a pollinated flower, and cannot bring myself to cover my garden, just when it is at its best, with little muslin bags.

When I said above that Foster reduced the number of wild originals of tall bearded irises to three, of course I was referring only to the plants already known in English gardens. He, himself, with the help of his numerous correspondents, added largely to the list of this

class by the introducing of forms from Syria and Asia Minor. So that more recent hybridizers have had grand new material to work on: whence especially the greater improved habit of new varieties such as Alcazar, Prosper Laugier, etc. Some of his additions have been mentioned already: it remains to note some of the most important of the others, and to add a few notes on their use to the hybridizer. Since his time great advance has been made, especially by French growers, in breeding from some of these newer forms, such as Trojana, cypriana, Mesopotamica. But it is only just to his memory to recall that it was through him that most of these fine species or forms first became known, and that he himself bred from them with conspicuous success. In this connection I should like to refer to Alberti, one of Mr. Dykes' 'Eastern' group of which I doubt if enough use has been made. Unluckily the name by some strange freak, is sometimes attached to a form of graminea. The true Alberti is a tall bearded iris, not very brilliant, but with wonderfully delicate pencilling on the falls. This character re-appears in two seedlings which Foster gave me, Alberti x Balkana a delightful coppery thing, and a white-flowered plant which I call privately Perpetua, because it blooms at all sorts of times as well as (very profusely) in early May: it is a charming plant, and for some reason the white butterflies are strangely fond of settling on it. For Alberti itself Foster advised the same treatment as for the oncocyclus group, but this does not seem to be necessary, though it likes a hot dry position. Mr. Dykes has given me a yellow form of it.

Foster gave me a bit of his original plant of cypriana, a name to which there are many pretenders. It has, if I remember right, (for I fear it is no more) a rather weak stem and a large floppy red-purple flower: like Mesopotamica, its best use is perhaps for hybridizing. From it. crossed with pallida, Foster raised several fine things. The finest and best known are Caterina and Lady Foster, the latter named, I think by Mr. Wallace after Sir Michael's death: Mr. Wallace and I both, I believe, first saw it at Shelford the same day. Caterina well illustrates the wisdom of seeding from a good hybrid: I first raised from it a number of seedlings, which seem to me to reproduce all Caterina's points with a good stiff stem added: I always have to tie up Caterina or she goes flat in a wind. The best of this new generation is called Ann Page. This year I hope to see flower some grandchildren of Caterina.

After Sir Michael's death Lady Foster invited me to see the garden again and let me choose some things to take away; among these I took a scrap of Ricardi. The scrap eventually grew into a huge flowered early iris, which sets abundant seed and has given me a race of seedlings with truly colossal flowers, some of which have good erect standards, which the seed-parent has not. I have crossed it with Purple King, Lady Foster etc., and pods crossed by the bees have also borne good results: the flowers of some of these measure fully 6 inches from the tip of the erect standard to the tip of the fall.

(The largest flowers however that I have seen I owe to the bees. I sowed uncrossed seed of a rather washy form of pallida Dalmatica, and it produced five distinct forms all of rich dark purple flowers: the Shakespearian name which came next was, not inappropriately, Proteus, and I have called them Proteus 1-V).

Trojana, it is generally admitted, was one of Foster's most valuable introductions: it is a fine plant itself, except for the rather poor foliage, and its branching habit declares itself in many of the newer garden forms. I do not know the origin of Vilmorin's Alcazar but a spike of this will illustrate the advance shown in this direction: I have had one with 10 flowers out on it at once. I am not sure that Foster had

used Trojana much for hybridizing, and I have no doubt that there is much yet to be done with it. Crossed with good pallida or Amas (as mentioned already) it produced fine things: but the best result that I have had from it is a 'casual' seedling called Hermione, which Mr. Bliss had been kind enough to pronounce a practically perfect iris: the flowers have a remarkable glistening texture, it is very free and a strong grower, and the leaves are the broadest that I have seen—a character certainly not due to Trojana: The spathes are sometimes 4 inches across and one can recognise the plant by its foliage alone. Foster's original plant of Cengialti was grown, he told me, from a bit of rhizome sent him in an envelope by a lady friend who found it on the mountain of that name in the Trentino: a more substantial parcel which she had first dispatched to him did not get through the customs. It is perhaps an accident that the name Cengialti has been attached to one rather than another of the countless wild forms of this charming plant which are to be found in those parts.—small pallidas, except that the foliage is bright green, not glaucous. Foster gave me also Monte Brione from the same region, developed from a bit of rhizome which Lady Foster prodded up with her umbrella on the fortress-crowned steep which dominates Riva of the Lago di Garda. Some years later I stayed at Riva and collected rhizomes on the 'chance' from various localities thereabouts, including the Monte Brione and the Lago di Loppio. The Monte Brione itself is (or was before the war) on one side covered with irises for some hundreds of precipitous feet. Except one, a lurida (? a natural hybrid of Cengialti and variegata) these are all of the same class, viz., self-colored flowers of great delicacy and precision of form, but varying endlessly in shade, in stature, and in time of flowering. They all seed profusely: I have given names to a few of the most distinct 'Rivas' thus produced, but their name is almost legion, and I get lost among them. One Juliet, is a fine large bi-color, and appears to have Amas blood in it: another, Mercutio, has very distinct drooping foliage, whence derived I cannot say. Moreover the intermediates between Cengialti and pallida, such as Mr. Dykes' Goldcrest, are a charming race, and I have pretty seedlings from Goldcrest.

Foster had received albicans (the white form of the Arabian Madonna, as Mr. Dykes has shown) from several different Mediterranean localities: he gave me forms from Greece and Spain, and another friend gave me one from Egypt: but I have discarded all of these in favour of a form which I begged from a hotel garden at Syracuse: it rioted just where presumably the Syracusan dames must have stood or sat in B. C. 413 to watch the wretched Athenian prisoners, victims to their country's outbreak of insane imperialism, starving and scorching to death in the so called 'quarry' below.

In the hope that my damper garden might induce Kashmiriana to flower, I accepted from Foster pieces of several forms of this species collected on the shores of the Persian Gulf and elsewhere. But the hope was not fulfilled, and during the war I put the plants into the Royal Horticultural Society's Sale for the Red Cross funds, in the hope that they might find their way into the gardens of more fortunate cultivators. What few flowers of this species I have seen were not striking, but Miss Willmott and Kashmir White supply evidence that this little known species may have considerable breeding value.

Of the dwarf-flowering bearded irises I cannot say much. The nomenclature of this group is very difficult to disentangle, and Foster used to speak of it as a great puzzle. The name pumila had been recklessly applied to all sorts of dwarf varieties, whereas the true pumila is a rather rare plant and not very easy to grow; and a mysterious class ticketed 'Crimean' irises had been created out of a confusion

(as Mr. Dykes has shewn) between Olbia in the Crimea and Olbia in Provence: While a number of local forms, especially of Chamaeiris had been elevated into species. Foster through his friends got together a number of the wild dwarfs and did much work in the way of disentangling their affinities: and Mr. Dykes has now by patient labor put the nomenclature of this group on an intelligible footing. Rarest of the group in gardens is perhaps pseudo-pumila, which I have collected on Mount Etna, where it covers acres of ancient lava, but I could not keep it. (The mention of that day on Etna recalls a certain streamlet which I saw, whose banks were lined with magnificient alata, growing nearly two feet high and with a rich variety of colour). My own garden is not well suited to most of the dwarfs, and, beyond raising a few interesting seedlings, which mostly had a short life, I have done little with Foster's gifts in this class. However the various forms of aphylla are prosperous enough. Foster raised a crowd of seedlings of balkana crossed with Cengialti, but I confess that those I know seem to me rather degenerate-looking little things with flowers of thin texture.

The bearded irises are at present no doubt by far the best known and the most popular. But something should be said in any reminiscenses of Foster's work about at least some of the apogons. He had a splendid collection of wild forms of ochroleuca, aurea, etc. His finest ochroleuca, unless my labels have got mixed came from Ephesus and is a giant nearly six feet high in a favourable season. He gave me also a dwarf form (3 1-2 feet high) which he advised me to take as being more free-flowering than the tall forms: accordingly it was six years in my garden before it flowered at all, while the tall ones, if not generous, were punctual. Some of the intermediates between the species of this class, such as orchraurea, are, I think, freer than the species themselves, and by seeding one gets a pleasing diversity, shewn specially in the varying proportion of yellow to cream-colour in the flowers. Foster's best known hybrid in this line was Monspur, (Monnieri x spuria), but the name has unfortunately been transferred by nursery-men to various forms of spuria, a species which seems to cover a great many local forms. Some of these (e. g. a lilac one which Foster gave me) are good, others insignificant. I am gradually ridding myself of the weed which bears the monstrous name Guldenstadtiana. I am attached to a dwarf spuria from Spain, given me by Foster, which only grows about a foot high. He gave me also an attractive dwarf aurea, but I fear it has died on me. The tall form of this Himalayan is a noble plant, if only it would be more liberal of its stately blooms. Some species of this group seem to be very 'old' and will not seed to alien pollen. Thus Foster told me that he had never succeeded in crossing anything with pseudacorus. This, one of the only two native British species, has many wild forms, of which the owner of a water garden could make an interesting collection. Our other British species, foetidissima, (its pleasanter English name is Gladwyn) I do not remember to have discussed with Foster: but, through the kindness of other friends, I grow two interesting forms; besides the ordinary one, a taller one collected in Algiers, whose seed-capsules are even showier in autumn than those of the ordinary form, and a yellow-flowered form, most beautifully marked in a quiet way, which seeds true and is an ornament to my bit of wild garden.

Foster's collection of Sibirica forms was very striking, and they flourished surprisingly on his dry hill. I have never pollinated sibirica or its Asiatic form orientalis, but some years ago I used to sow seed from the best forms that he gave me, especially a lovely light blue, and I have now a rich variety of this tribe, the best of which have the tall sibirica habit combined with the red spathes and large flowers of

orientalis. They have a wonderful fascination, and I have even gone so far as to name a few of the more striking varieties from birds such as Halcyon, Blue Jay, Whitethroat. If any iris lover does not grow a few acquired good forms and then increase and vary his stock from seed, I can heartily recommend the practice as both easy and fascinating. Many of the plants will flower in the second year from seed, and one ought, (though I can seldom bring myself to do it) to destroy the less worthy of the progeny. I do not find old sibirica clumps easy to divide and replant, which is a further reason for resorting to seed, as old clumps in time seem to exhaust the soil and go off.

By the way, I am often asked if one does not have to wait a long time for seedling irises to flower as for orchises and most lilies. Apart from the fact that if one sows seed every year, there is always something maturing once a start has been made, I do not think that the genus makes any undue call on the gardener's patience. True that an **oncocylus** hybrid as Foster told me—may take 10 years, and be the more worth having the longer it has taken to germinate and grow; but this very peculiar race is altogether exceptional in this as in other respects. My experience is that a certain number of bearded kinds will flower in the second, pretty well all by the third year. Some kinds of irises grow much faster than others, very large-growing things may take a year longer and the season in our incalculable climate makes a great deal of difference. But one amateur's experience does not count for much, and mine is not especially favourable to rapid development, as in a garden mainly devoted to 'economic' plants I can rarely find suitable nursery space for my infants, but have to stick them into any odd corner. My most rapid results have been with a bed enriched by growing sweet peas in it for some years previously: which is a fact perhaps worth noting. Last year some 40 plants of Cengialti or 'Riva' parentage flowered from seed gathered in 1917. If a seedling does not flower till the third year, it has often made up for it by some vigorous root-growth and can be divided when it first flowers: this is of course desirable with a good new variety, as it prevents one's putting all one's eggs in one basket.

Of ensata I can say but little. Foster gave me several forms of it, but for some reason this iris does not like me: I have now only one clump of it and that flowers but scantily. The foliage is pleasant and I believe that much better forms have lately been introduced from China.

It is difficult to say, especially at this distance of time, what irises were not to be seen at Shelford. I do not think however that Foster (probably because of the lime in his soil) made much of the Californian group, except longipetala which is not exacting. His 'tollong' a hybrid between tolmeana and longipetala is well known: I find that its seed is fertile and produces pretty things. The longipetala group is not very showy, but they make a charming effect with rose-colored Darwin tulips planted among them. (Yet another digression!) Darwin and bearded irises. They show up against the green or glaucous foliage, which also conceals their not too graceful dying. The tulips are mostly over before the irises begin, but for a few days the scarlets and crimsons of the tulips may make a garish but not unpleasing effect with the rich purples of early germanica forms.

When the irises are taken up and divided every third year or so, the tulips also come up and benefit by replanting.

Nor was Foster's the garden for such moisture-loving species as versicolor (which he told me was called in America virginica) or tripetala or setosa. Nor do I remember seeing the American fulva, lacustris, or verna, though it is likely enough that they were there.

Hexagona he grew, but complained that it would not flower: he told me definitely that the American form Lamancei (foliosa), which as well as hexagona, he gave me and which flowers very fairly, had nothing to do with hexagona but there he seems to have been mistaken.

As to irises from the far East, I remember asking him about gracilipes, and he gave me my tectorum, or rather its ancestors, as I find it advisable to keep on raising this lovely species from its abundant seed: indeed this habit seems to suggest that it is perhaps not a long-lived plant, though its life can be prolonged by frequent division and re-planting. He like others had tried unsuccessfully to cross tectorum with milesii.

The new Chinese species Wilsoni, chrysographes, Forrestii, Bulleyana had not been introduced in his life time. Here again I find a pretty pastime for the gardener: grow these species together and sow some of the seed, and you will get all sorts of things, some of them quite attractive. I have purple Wilsoni seedlings, chrysographes seedlings varying a good deal in the ground color and in the gold markings, Forrestii seedlings of all manner of hues, including one which I cannot distinguish from Mr. Dykes' plant of Bulleyana. I am not sure if the true laevigata was known in England in Foster's day: happy are they who can give it the bog treatment which it requires to show its full splendour. A friend of mine who bought it, I believe in Yokohama, has a free flowering form which he grows in tubs set in a pond, where it appears to bloom at intervals from June to October. The white form of laevigata contests with the white tectorum (which catalogues will call Iris tectorum album) the prize of beauty among white irises. orientalis 'Snow Queen' and albicans 'Syracuse' might put in a claim for second place, while Kashmir White and Blanch should win some votes. But I should be sorry to have to place these six ladies in an order of merit.

Perhaps this digressive article has wandered far enough. Let me conclude by recalling one gardening wrinkle which I picked up from Foster. He had endless patience and would wait many years (as many as twenty, in an extreme case) for seed to germinate. And when he did turn out a seed-pot he emptied the contents, not just anywhere, but on cultivated ground on the chance that seedlings might yet appear. Wherefore, at least whenever I feel energetic enough, I not only do the like but collect the seedlings which occasionally turn up outside the pots in my nursery corner and plant them with the label 'MISC'. One of such orphans it was, I believe, which bloomed last year and was christened Ferdinand (it should rather have been Perdita but that name had been used). This foundling is, I think the most distinct of the seedlings which I have so far raised, and I wish I could have shown it to my revered master..

Iris Ricardi as a Parent

F. Denis, Herault, France

It was in 1895 that I first saw Iris Ricardi at Avignon in the garden of my friend, M. Alphonse Ricard, who had received it from the vicinity of Jerusalem; It is a native of Palestine and appeared distinct from all the species in cultivation. A plant sent to Sir Michael Foster in 1905 flowered the following year and upon study he described it under the name of cypriana var Ricardi. In his fine volume "The Genus Iris", Mr. Dykes has called it a variety of Mesopotamica, but

after growing them side by side for many years I find myself of Sir Michael's opinion.

Iris Ricardi has been imported several times especially from the vicinity of Mersina by Siehe and almost always with the rare Iris Junonia of Schott and Kotschy. Altho it belongs to the same group, Junonia is much shorter stemmed and has smaller flowers.

Horticulturally Iris Ricardi has two dominant qualities, the flower stalks attain a height of five and a half feet and the flowers are exceptionally large, but it also has several faults. Like the Oncocyclus irises it demands, a soil rich in lime, and plenty of warmth and sun, and, moreover, the stalks are generally slightly flexuous. By hybridization one should be able to preserve the good qualities and yet ameliorate the faults. My first experiments were made over twenty years ago and as Ricardi seeds freely I have used it almost exclusively as a pod-parent.

Of these first seedlings only two have been preserved; Mme. Claude Monet (Ricardi x Kochii) has developed the large flowers of the mother and the colour of Kochii. In its first blooms, the standards were flat and if my gardener had not interceded for it, I should have thrown it away, but this abnormality has never occurred again: Mme. Bories which also has been awarded a certificate of merit from the Societé d' Horticulture de France, is lower than many of the Ricardi hybrids and the stems are rather weak.

Ricardi crossed with Her Majesty has given a series of good seedlings. Clement Desormes, J. B. Dumas, de Forcrand, Prof. Scheubel, and others, some of which have retained more or less the soft rose coloring of Her Majesty.

Among Sir Michael Foster's seedlings there is one called Kashmiriana, var Shelford, with large flowers of an almost pure white. This interested me particularly because I have never been able to see any trace of Kashmiriana and in order to settle the parentage I have crossed it with itself and sown the seeds. Some of the seedlings reproduce I. Ricardi and others are almost typical pallidas. Sir Michael apparently used I. Ricardi and how or why the name Kashmiriana was given, we shall doubtless never know. I wished to repeat Sir Michael's cross and used pallida Dalmatica in place of an ordinary pallida, the results give a rather large proportion of albinos, the best of which is Miss Cavell, a beautiful cream white with an orange-yellow beard. Altho easily grown here in Southern France it is very delicate in the North. Other seedlings have flowers streaked with blue-purple, and Mlle. Schwartz, Jeannie, Andree Autissier have more or less pale blue flowers. For the most part they all have strong stalks. Iris Ricardi x variegata, and vice versa, are generally sterile altho Ricardi x Darius has given Mme. Durande one of my best seedlings and Ricardi x Gracchus has given M. Menetrier. Unfortunately neither, when crossed with variegata, have given fertile seed.

As I have already said a number of these seedlings have slightly flexuous stems and it is for this reason that I have been lead to use Iris macrantha, or its hybrids, which should also give a hardier constitution. Suzanne Autissier obtained in 1914 has been the first result, it is a cross of Ricardi-squalens pollinated by Oriflamme, it is not as tall, but the stem is strong, the color good, and the plant vigorous. From the many seedlings of analagous parentage now under study I consider that there are fine chances for the future.

Present Favorites and Future Prospects

Sydney B. Mitchell, California

Should I be asked to make a selection of a dozen thoroughly good, yet not so very expensive tall bearded irises it would probably include pallida dalmatica, still unsurpassed; Juniata, a taller, darker, and very graceful pallida; Mandraliscae or Violacea grandiflora for a darker blue; Iris King, all things considered the best gold and brown; Prosper Laugier, a brighter squalens than Jacquesiana and an equally good grower; Jeanne d'Arc, the best lightly fringed plicata; Quaker Lady and Eldorado, two free-flowering blends, particularly attractive in association; Archeveque, a rich red bi-color very given to fall as well as spring blooming in California; Isoline, in spite of its shy blooming and its poor summer foliage; Caterina, a good grower with fine flowers here; and, least to be omitted, the giant Alcazar.

Yet this list leaves out several varieties, not all new and not all very large, of which I am very fond. Perfection, for richness, distinction, and free flowering, still holds its place in spite of novelties, and Monsignor, though it too, is rather stiff and compact in its flower spike, is unsurpassed in its class. Two of Farr's seedlings, Mount Penn, a deep pink suffused with yellow, and Minnehaha, a large, deep cream with purple lines, fall far short of my ideal in height and growth yet are so distinct that I want them. Fro though smaller than Iris King, is with me a better doer and is clearer in color; Sybil is my favourite pink bi-color. Probably Ann Leslie surpasses it, but the latter has not yet flowered for me. Goldcrest (Dykes) is a good, clear-cut blue with conspicuous orange beard, but lacks height as it is a Pallida-Ciengialti seedling. Corrida (Millet) and Cordon Bleu (Sturtevant) I should class with it for their nice neat but not large flowers. Dream (Sturtevant) and Delicatissima (Millet) I also think of together as they are both lovely pallidas of pink tone. Of the so-called red pallidas I am, as a rule, not fond, yet Edouard Michel, though not of best texture I greatly admire for its fine size, shape and color; Mauvine is another tall pallida worth while for its unusual color even if its standards are a bit weak in substance.

Among such later novelties as I have seen I have several favorites. Shekinah's pallida growth and fine pale lemon-yellow coloring are all that is claimed for it and establish a new standard for yellows. Avalon in its combination of fine size, shape, substance and color is not equalled and I am glad to be able to report as well that it is proving a fine grower here. This and Madame Durand are the best new irises I saw this season, but they do not compete, as the latter is a Ricardi hybrid, of very tall, branched growth, with huge flowers somewhat like a pale Eldorado, a striking and unusual color, Leverrier, also a Ricardi hybrid, of very tall, branched growth, with huge flowers somewhat like a pale for California, but are not likely to do well in sections where Caterina does not grow and flower well. This is also true of Lady Foster which I much prefer to Crusader, and of the tall Kashmir White, which in California is far superior in every way to such albino variegatas as Innocenza, White Knight, or La Neige.

Though Mr. William Mohr of Mt. Eden, Alameda County, California, has not yet even decided if he will introduce any of his seedlings and has developed no stock of any of them, those who raise seedlings

may be interested in his results as they appealed to one frequent visitor to his ranch last spring.

His earlier crosses were nearly all with a limited number of varieties. Juniata was the seed parent, and pollen was used from Lohengrin, Her Majesty, Rose Unique, Iris King, and Pfauenauge. Juniata has proved very effective in adding height as well as in giving larger flowers. He has a Juniata x Lohengrin seedling in which the flower is almost exactly the color and shape of Lohengrin (Prince Lohengrin) but a great advance on it not alone in larger flowers but in its open, taller stem, a great improvement over the closely packed one of the original. I saw also several as yet unsegregated pink seedlings of Her Majesty and Rose Unique colors, but with the tall stems and large flowers desired with these colors, Juniata crossed probably with Iris King has given some flowers of Dalmarius type but of larger size and better color. Among these seedlings was a new shade of blue, quite different from any I have in the named varieties. Two seedlings probably of Juniata x Pfauenauge bloomed this spring and proved very attractive, one was a blend like a larger darker Quaker Lady; the other had metallic grey standards and falls of a wonderful blue with grey edge. He also has a flower of good size and shape with standards of pale French grey, the falls of the same color being irregularly blotched or flaked purple. It is quite distinct and as the flowers are well placed on the stem, they give a light airy effect like big butterflies.

He is, however, no longer interested in this earlier work since he acquired Mesopotamica and learned what it would do in increasing size and height. Mesopotamica is very close to the I. Ricardi used by Denis, and probabaly to I. cypriana, which is one of the parents of Caterina. It is a huge, coarse flower on a tall, ungainly stalk, but when bred with such varieties as Juniata, Oriflamme and Parisiana, all of which have stiff, heavy stems, it has given wonderful results in big flowers of good form on erect stems, the colors mainly shades of lavender and lilac. Some of the flowers, such as (Juniata x Mesopotamica) x Mesopotamica, are the largest I have ever seen in bearded iris, but as yet they lack the variety of color achieved by M. Denis in his Ricardi hybrids. He has also a few nice Carthusian seedlings, one a very delicate color.

Mr. Mohr has hopes of getting new colors into the tall bearded iris by a small infusion of Oncocyclus or Regelia blood. His Korolkowi x Germanica major is certainly a distinct new shade of blue, and in California it does well treated as a bearded iris. He has also several crosses between Korolkowi and Mesopotamica, but these, though tall and strong and of large flowers, are of rather dull blue greys. Crosses of Ibmacrantha and Mesopotamica, have given better results in growth, color and venation, often shades of veined blue, very suggestive of the flowers of Salpiglossis. To me these seedlings in their tall branched growth and interesting blue-veined, flowers seemed a big advance over Sir Michael Foster's dwarfer, duller, Oncocyclus-Pogoniris hybrids such as Lady Lilford. They are, however, merely a step, for they have been again crossed with some of the standard bearded iris to improve their constitution. It remains to be seen if the smaller amount of Oncocyclus blood will carry the venation and the new shades of color.

The earlier crosses of standard bearded iris should do quite as well in the eastern United States as do the introductions of other breeders, but the Mesopotamica hybrids will need testing to prove or disprove their adaptability to colder, wetter gardens. But the iris lovers of California and the southwest will certainly want them for their vigor, size, height and early blooming.

Notes from My Hybridization Records

Grace Sturtevant, Massachusetts.

I offer the following lists of Irises as a help to the amateur interested in raising iris seedlings. They will enable him to avoid many fruitless crosses but this unfortunately is but the first step, the student will have to find out for himself the fertile crosses within the lists, for those that produce seed will not do so with all varieties that have fertile pollen.

Varieties that have proved fertile with me.

Archeveque
Alexander
Alcazar
Adonis
Acquahanonk
Aurea
Bacchus
Buriensis
Black Knight
Bridesmaid (Alpine)
Bridesmaid (Pli.)
Caprice
Carthusian
Caterina
Celeste
chamaeiris
Cordelia
Count de St. Clair
cypriana
Darius
Dawn
Edina, syn Reticulata alba.
Edouard Michel
Fairy
Flavescens
Fro
Garibaldi
Gracchus
Halo
Hector
Her Majesty
Ignititia
Innocenza
Iris King
Isola
Jacquesiana
Jacqueminot
Johan d'Witte
John Foster
Juniata
Miss Willmott
La Neige
Lohengrin
Lurida
Ma Mie
Maori King
Mesopotamica
Miralba
Mme. Almira
Mme. Chereau
Mme. Paquette
Mrs. G. Darwin
Mrs. H. Darwin
Mrs. G. Reuthe
Mrs. Neubronner
Mt. Penn
Nibelungen
Nine Wells
Orifiamme
Pallida Dalmatica
Pallida speciosa
Pallida racemosa
Parc de Neuilly
Parisiana
Patience
Perfection
Princess Victoria Louise
Prosper Laugier
Ricardi
Rose Unique
Sambucina
Sappho
Schnee-kuppe
Shelford Chieftain
Sherwin Wright
Sybil
Souvenir de Mme. de Gaudichau
Striata
The Bride (Crimean)
Thorbeck
Trojana
Verbena
Viola
Victorine
White Knight
Wyomissing

Varieties that do not set seed but have fertile pollen.

Amas
Fontarabie
Halfdan
Hebe (Reglio-cyclus)
Ivorine
Kochii
Sarah
Sarpedon

Varieties that set seed but where the pollen is absent or sterile.

Dr. Bernice
Monsignor
Kharput
Mrs. Alan Gray

Iris that are sterile.

Cherokee Maid	Hamadan	Parvar
Germanica	Helge	Queen Flavia
Dilkush	Ingeborg	Korolkowi hybrids
Dorothea	Isis	Sabrina
Etta	Isoline	Spectabilis
Empress	Paracina	Susiana hybrids
Florentine	Paradoxa	Walhalla

As a rule plants resulting from wide crosses are sterile, such as Mr. Mohr's Susiana x Ib-macrantha, Mr. Williamson's Missouriensis x pogon, or my orientalis x pogon and our Korolkowi x pogon seedlings. M. Denis observes that plants from Ricardi x variegata crosses are usually sterile. You will notice that there are a few exceptions where the pollen has proved fertile.

Sterility often blocks a desired line of investigation in what Mr. Bliss calls "progress breeding" tho sometimes if the breeder is persistent enough a few seeds may be obtained. In one case Mr. Bliss made 500 crosses before he got a single fertile seed. And then again the above list of sterile varieties may produce seed under other conditions.

GARDEN EFFECTS

In a Society such as ours devoted to the interests of but a single genus, we are often prone to forget that our interest lies not wholly in irises as irises, but to a large extent in iris as one of the foremost flowers for garden decoration and it is from this point of view that I present the following notes, jottings, made sometimes from actual observation and sometimes from the garden writings of real students.

Let us start with the old classic combination of Spirea van Houttei I. Dalmatica, and flaming oriental poppies, such a contrast needs a good setting of green in sward and encircling shrubs: I much prefer Mrs. King's suggestion of similar toned irises with some of the soft salmon hues to be found among the hybrid poppies. I think she might like also the close harmony of blue and red purple that we might secure by planting Kochii and perhaps Fontarabie next to each other. Kochii, by the way, can only be compared to Archeveque for richness of massed color and I have always wanted to try some vivid orange Trollius in their vicinity. Azaleas, too, in warm yellow and orange tones ought to offer possibilities for combination; the flowers have a certain similarity in texture and quality of color that should produce a harmonious result, but Miss Sturtevant steers me away from the trial and I must leave fancy and come down to fact.

One unseasonable year I reveled in I. Dalmatica, Madonna Lilies, and rambling sprays of Dorothy Perkins, but I never expect to see this combination again; I. Bluet with ferns and the white Sweet Rocket are, however, to be depended upon, and that reminds me, lavenders, however lovely they may be in the open, or with the level rays of the setting sun glinting thru them, are more in keeping with the shadows. Unless the Darwin tulips are belated I look in vain for soft pinks to go with pale lavender, white, or yellow irises and every spring I plan to get some pink China roses and try out Miss Jekyl's suggestion. In general pink is not a very safe color in the iris garden because an iris-pink is not sufficiently pure to stand competition. Mr. Bliss brought out a point in a past letter about pinks, that is worth remembering,

and that is that the warm pinks, those with yellow in them, loose quality under artificial light whereas the cold tones show up well.

"A Painter" in the Aug. 30, 1919 issue of The Garden tells of some delightful plans: "Alcazar planted back of Sweet Rocket, the violet sort, and a little of the white with it if it blooms late enough, the Persian Lilac behind them all. Prosper Laugier and Jacquesiana need something to throw up the splendid darkness of their falls and a planting of Flavescens or Dawn with the grey green foliage of Buckthorn as a background has proved successful. Iris King, yellow tree lupins or Thalictrum aquilegifolium purpurem, (I suspect this grows wild in our woods) also blend in. The lovely Rosa Hugonis is suggested as attractive with the intermediate irises Queen Flavia and the blue Dauphin." In England they are most fortunate in having a number of clematises to use at this season.

From England too comes Miss Jelkell's report of a graded color scheme where irises have their place. "Next come tall pale yellow irises and Golden Privet, a capital thing for clever use in this way. The colouring then passes by deeper yellows to some of the irises of the squalens section of rich purple with red purple lupins, a harmonious quality of colour being provided towards the front by a grouping of Incarvillea Delavayii." Further on "comes Queen of May with white and rosy perennial lupins and a front planting of pink pinks".

One of our members, Mrs. Brownell, sends the following; Back row; Aurea, Flavescens, Rose Unique, Front row; Mary Gray, Quaker Lady, Isoline, and I wish you could see Mrs. Gage's place "Iristhorpe" in iris time, the drive just bordered with our favorites and a particularly taking use of Rhein Nixe, Mrs. Horace Darwin, and tall deep blue Siberians in masses.

"I saw a most inspiring, remarkably lovely planting of the shrub, Rosa Hugonis wreathed and irregularly bordered with pallida Irises and a tall golden iris, the planting was outside a pair of great iron entrance gates to an estate and on each side of the gates, perhaps a hundred feet long at each side, there were thousands of irises and many of the golden flowered Hugonis rose, whose exquisitely delicate foliage was in charming contrast to the broad dominant spears of the iris. The color of the rose is something more than just golden yellow, there is a sheen and complexity of golden hue not quite describable and when the flowers are gone the great beautiful, "shrub" remains a joy with its tiny, rarely-fashioned leaves, lovely form and enduring fineness. It seems to me that we are begining to plant "big", we are becoming lavish and that is as it should be".

Surely this is a delicious suggestion that Mrs. Elinor Harde, Editor of "Our Garden Journal" has shared with us.

If I remember correctly the pinks are the only things included in these English notes that would not bloom at the proper season in my garden here in Massachusetts. My stock of quotations is running low, I must cull my memory for the rest.

Just as with the dark pumilas I like the lavender of Phlox subulata lilacina, so, with the later lavenders, I want Phlox divaricata, the type, not the less clear Lathami. This I find indispensable, it carries thru tulip time well among the late irises. The tulips, in pale yellows with the germanicas, and scarlets with the lavender intermediates, may be depended upon in my garden, but only occasionally can I use their hues with the late blooming irises and it is a pity for the two should combine in infinite variety. Lilacs, tho often too tall to come within the same angle of vision, blend well and the pink of Flowering Almond or one of the Japanese Cherries is almost luscious with the pale tints, or, we might try these same pale tints with the Japanese Quinces, particu-

larly the dwarf Cydonia Maulei. At this season of the year one has but little height among the perennials and shrubs as a background often help. Fortunately the peonies rarely bloom with the irises but if, perchance, they do and the two pinks come together one must be sacrificed for a surety.

Within the irises themselves, there is many a chance for combinations of interest, try the simple scheme of cool white, translucent lavenders or deep purples, perhaps you prefer the yellow tones and use Aurea, the creamy Innocenza and a rich bronze like Dr. Bernice. Once I worked out a yellow scheme; parts of it are lovely and tho Shekinah, Aurea, and Athene could be depended upon to light up the richness of Iris King, Arnols ,and Jacquesiana or the mingled hues in Demure and Sherbert, Nibelungen which, as an individual blended well, as a mass proved out of key.

The warm pinks I dislike with yellows, but put them with white or the creamy lavender of Queen Caterina; the cold pinks, clarets I term them, on the other hand, seem to blend more satisfactorily with the pale tints of Dawn and even then I want them a little to one side of the main view.

It is curious how some colors carry well, while others, apparently as bright, do not; how some attain character when seen from a distance, or the reverse. For example, at a little distance one looses the crispness of Zua and Florentina gives as fine an effect; Helge becomes a dingy yellow, and the Halfdan is really good; Kochii looses brilliancy and Kharput with its velvety falls is far more effective; Dorothea, which is delightful near at hand becomes merely a dulled Florentina, and Mrs. Allan Gray may show up as pinker than one thought. In general the darker colors do not carry well, nor do the blends and if we want an effective planting to be seen across the lawn there is nothing finer than the light tones of a pallida, of Flavescens, or Florentina.

On the whole the Sibericas are very effective for their size and Hemerocallis in its varieties not only thrives under similar moisture conditions but forms an admirable foil with its yellow or orange flowers. I do not care for them so much with the Bearded Irises, they are so different in texture that the color proves a trifle hard.

I have said enough to encourage you to study the color effects for yourself and to work out some of your own combinations, but I want to close with an extract from a catalogue of W. J. Caparne's New Hybrids published probably about 1902.

"It should be pointed out that many of them are essentially cut-flower plants, and that if garden decoration is desired, only those varieties which have simple colours should be chosen, for the more intricate flowers are best seen close at hand and in combination with a considerable amount of white, and light or pale blue, to give them their true decorative effect. It is as impossible for green to be the right background for every flower in your garden as for every beautiful thing in your house, therefore, lay single blooms of iris on the white dinner cloth, and put two or three in small vases where they can be seen and examined. It is better to snap off the flowers for this than to cut with stems: they will keep fresh for hours without water, and you will have provided a feast for the gods."

"For filling tall vases Iris spikes which are from one to three feet in length are excellent, a few tufts of their own leaves greatly improves the effect. Each flower lasts in perfection for three whole days, and if the dead flowers are kept pinched off, the remaining buds continue to open freely in water."

From a letter from G. H. Francis, Melbourne, Victoria.

September 1, 1920

"We grow the iris here in quite a number of varieties, most of them of the Germanica section. I reside about five miles from our capital city, Melbourne where the climate is very varied, ofttimes over the century in summer and as low as 30 or 40 degrees in winter. Yet irises stand the low extremes and do not require covering which speaks volumes in their favor as hardy plants.

I am in touch with growers in New South Wales, South Australia, and Queensland, states where irises seem very little known or grown with the exception of the common blue and white varieties (Florentina and germanica ? Ed.) which the early settlers introduced sixty or seventy years ago.

The Queensland and New South Wales climate is pretty severe for the three summer months. They have just recovered from a very severe drought, which I know completely destroyed some gardens where water was not procurable but now they have had bountiful rains and they are pretty sure of four or five good seasons. Yet with all these drawbacks the good old iris has lived thru it all.

With us, irises are not particular in either light or heavy loam, provided it has perfect drainage and is kept fairly dry during the resting period which is from January to March. I grow them in rows by themselves as they are easy to cultivate.

Purple King comes in early June and is very welcome as most flowers are scarce, Kharput is a good second and July gives us Crimson King, another welcome addition. It is a lovely decorative variety, massive, and a tall grower. In August and well into September come Gideon, Italia, and Shiraz; then a slight rest in mid-October, and the other varieties offer a glorious feast of color until the end of November. Mrs. Alan Gray flowers on and off right into March. Some of your growers may have had a similar experience; (please note). Is it the usual thing or a freak?

We also grow the dwarf pumila section which is fine for bedding purposes. Some of the light shades have a washed out appearance, yet the blues and yellows are fresh and bright tho, of course, they are not to be compared with the tall varieties. The intermediates also flower in August and are worth growing. The Sibiricas come in November and are of easy cultivation if given a little protection from the afternoon sun. Stylosa, ochroleuca, tectorum, alata, cristata, juncea, and reticulata all seem at home tho, the different varieties require a little different treatment.

The Japanese irises, provided water is available make a great show about November and December. They make a specialty of these at the Alexandra and Botanic Gardens and I believe they have one of the finest collections of seedings in existence, far ahead of the best raised in Japan. We are indebted to Mr. J. Cronin of the Melbourne Botanic Gardens and to Mr. Cooper of the Alexandra Gardens for some fine creations.

The Spanish iris do well and are grown in variety, but the English demand a fair amount of moisture during the flowering stage. I grow also a few of the California species but have failed with the regelias, and Onco-pogon crosses. Iberica, Lorteti, and Susiana all do well in the cooler parts of Victoria and Tasmania where they get plenty of good leaf mould to grow in."

The Effect of Quarantine

Mrs. Jennett Dean, California.*

Our Secretary writes us "our members seem to want variety stuff" and from the numerous inquiries we know this to be a fact, nor is it surprizing, for the more one really appreciates irises, the more desirous one is to possess the whole genus. The prospect at present, however, is not very promising. We understand that imported stock cannot itself be sold for three years (I understand the offshoots can be sold, Ed.) and as there was comparatively little stock in this country it will be some time before the supply will equal the demand.

Among the Oncocyclus probably Susiana is the only one that could be obtained in Europe as the growers there seem to have depended wholly upon the collectors and The Near East is still in an unsettled condition. Of Susiana there does not seem to be any amount in this country and tho there are favored localities in California where it might be grown the price would necessarily be much higher than before. We continued to fill our few orders for others of this race as long as stock permitted but in 1917 we were unable to secure more from the Holland growers. Altho it was a losing game financially owing to the small demand, we have never regretted the venture as it offered an opportunity of seeing atrofusca (apparently the easiest to grow) Gatesi, Lorteti, Sari, and several others. The Regelias, Korolkowi and the even lovlier Stolonifera and its variety Suwarowi we grow also, but even at $.35 probably sold only a few plants a season so that our attention has been more and more directed to the Pogoniris.

Similar conditions have affected the stock of the Junos and a number of the Xiphiums; as early as 1915 the Holland growers could not supply things such as reticulata, histrio, Haynei, Persica, and others. In southern California alata does well and in a nice lot of bulbs secured from Italy there was a wide range of color and markings, but again there seemed to be an utter lack of interest among the customers. Now that there does seem to be some interest, the stocks of orchioides, bucharica, Tingitana, which has proved fine for forcing, is so small that it will be long before they are offered and it would probably be impossible to supply the demand for the English, Spanish, and the Dutch irises that were imported every year in large quantities. I understand, that—in addition to what is already being grown—there have been large importations of seed and bulbs of these varieties, quite recently.

Where then is our "variety stuff" to come from you will say—we have undoubtedly a little stock of many of these things being grown quietly and it will be offered when there is sufficient to make it worthwhile. It takes more to go round in our Iris family than it used to do. Until the past year or so it was quite safe to offer anything one had but a few plants of, but that has largely changed.

While you are waiting, why not try the ones offered in the spuria group, they are easily grown and as fine as the Spanish irises—finer in many respects. They do not have as wide a range of color, but that is for the hybridizer to produce. The California species, if they succeed will well repay the trouble for they are dainty and delicate, and are very disirable for cut-flowers,—better than the Spanish for some purposes and are "native daughters" and do not have to be "American." These and unguicularis are much prized in England. This last should

do well in any climate no more severe than the English climate and few people seem to realize that they are obtainable. The variety lazica, by the way, has proved an absolute failure with us.

We trust that the foregoing will make clear why we cannot supply some of the novelties so desired. The saying you know that "experience is a dear teacher" is true, but as we look out of the window on the little plot of ground where we planted our first collection of these strangers, following faithfully Mr. Lynch's cultural directions, in our imagination we can see, first the array of th most fascinating Oncocyclus, those wonderful large Susianas, then others similar, the very large delicate Gatesi, and the queen of all, the beautiful Lorteti; later in the season the regelias and bulbous in several varieties, and our regret is that we cannot furnish all who desire them, the rhizome or bulb ized". They are easily grown from seed and should do well in the Southern and great Southwest states as well as in other localities. which encloses such beautiful and wonderful things, and that we could blot out all that has marred the face of the country from which they sprang.

WHAT WE VALUE IN A VARIETY

With the widespread interest in irises and a consequent introduction of many new varieties, it is becoming increasingly desirable to establish a standard of valuation sufficiently strong to discourage worthless novelties and yet pliable enough to admit those which, in some way, may prove of distinct garden value. We may cling to our first acquaintance among them for remembrance, but as our collection increases our sense of discrimination becomes more clearly defined, we find that almost 90% of the irises listed in the general nursery catalogs do not measure up to our present standards, we find that even the specialists still carry the less good things, and occasionally even the novelties are a disappointment. To be sure, many so-called new plants are not new in reality, and, it is equally true that all breeders look back upon many of their first introductions with regret yet, even then, the future should be considered. Open discussion in publications is the only means of control and it seems to me we need a Score Card for a basis.

Back in the April 1918 number of The Garden Magazine, you may find my first proposal of a garden score card for irises, in September, 1919, Mr. Bliss' reply was published and in the active correspondence last winter between the members of the committee on nomenclature the subject was brought up and I think that the following apportionment of points represents a fair consensus of opinion.

The Plant, 40%		The Flower, 45%	
Growth (strong)	10%	Color	15%
Garden effect	10%	Form	10%
Poise of stalk	10%	Size	10%
Height (in its class)	10%	Substance	10%

Outstanding Qualities, 15%

To be distributed for general excellence, for unusual development in any respect, such as unique color, scent, foliage, or perhaps use as a cut-flower.

It is necessary to remember that our judgments are necessarily comparative; both Pallida Dalmatica and Iris King might be considered equally good and yet the former has clearly the advantage, in height,

substance, form, in fact in many respects; in other words, one is a pallida, the other a variegata and so far, these last do not give us either fine height or size, however rich and worth-having their color. Outstanding quality of some sort is a necessity, otherwise why should we buy the thing.

There is a certain fascination in growing a difficult subject, but lack of constitution or weak growth under ordinary conditions are hardly marks of credit. And after good growth I always think of what the plant in flower looks like, does it make an effective sheet of color, a charming clump, or does it provide stalks for decoration either indoors or in some carefully planned color scheme outside? Unless it satisfies one or more of these aesthetic needs, I find that it slowly works its way from one place of trial to another until forgotten in some neglected corner. Othello I like in a mass, Perfection nearer by, Monsignor in a well-developed three or four year clump, and Souvenir de Mme. de Gaudichau even as a single well-poised stalk. I have purposely drawn my examples from the same color range, each is worth having if rightly used, tho there may be a variety that would satisfy in all these positions.

In my small garden, poise of stalk means much to me. Some varieties carry their flowers with a certain style, others rather wearily with an air of wanting to lay their flower burden down; in some, the flowers are clumsily large, in others noticeably small, and all these effects are expressed thru the relative proportions of size and form of flower as compared with height and branching of stalk. For instance compare, in this respect, Isoline and Dalmatica, Orifiamme and Mrs. Alan Gray. Poise of the stalk is, naturally, far more to be considered in specimens than in varieties to be planted broadly. Height needs little comment, I think we all value it, partly because it is not as usual and partly because the nearer a flower is to the level of the eye the more we may perceive its delicacy, but low masses are equally desirable for effect; tho, when we consider the quantity of material already at our disposal, I for one think we need few new irises that are not tall. Certain colorings only are missing from this range.

With the flower, color is unquestionably the most conspicuous quality, it is, however, largely a matter of individual taste. Personally I like clear, clean colors, pure; or evenly washed or blended, the markings if conspicuous, well-defined—I dislike indeterminate or irregular combinations of tone. Eldorado, and particularly Pfauenauge, are for me about as homely as an iris can be. Altho substance is, in a way, the actual thickness or body of the petal, it seems to me to be suggested in the color. In the data card we have used also the terms texture and surface. Whatever our ideas of these definitions, I think you will all appreciate the difference in effect of very similar tones in, for instance, Caterina and one of the pallidas; the first seems to reflect light, the other to absorb it, and, as a result, varieties may be very close when their colors are referred to a color chart name while in actual garden effect they would be notably distinct.

Form also, is a matter of taste: Mr. Bliss prefers a flower with rather rounded segments, the falls flat and spreading; Mr. Williamson a somewhat globular bloom, while Miss Sturtevant likes perhaps equally well, the rounded White Knight, Monsignor with standards that form a cone, Queen Caterina with smoothly drooping falls, or Avalon with ones that roll out with tips that flare. So it goes and yet we all agree that the flower should appear balanced, the petals firmly carried, and whatever their position, a width of haft, and style-branch that gives compactness at the center. In Tamerlane, the effect is top heavy due

largely to the incurving falls, in Oriflamme the weak standards tend to break inward, in Eldorado the narrow segments give a spidery effect. You see it is easier to pick examples of faults that or perfection. Size! We all wonder at enormous bloom and some say the bigger the better but in the long run is it not the pleasing effect and proper balance of stalk and flower that really satisfies? I certainly think so even tho I can't resist buying the biggest of all.

"Outstanding qualities" is an all inclusive term, it may be all or any of these characteristics I have mentioned, or part at least of that 15% may be awarded for fine foliage, fragrance, effect in a certain color scheme, duration of bloom, freedom of flowering, almost anything you will, that marks that variety as worth having.

I do not like to feel that any judgement based on comparative estimates and the whims of the judge is final yet I do believe that we need the Score Card and that this Score Card is very close to the ideal when we consider the value of the plant in our garden.

AN INFORMAL SYMPOSIUM

This is not to be considered as a final symposium of the varieties listed or its findings based upon any standard of scoring, it is merely an indication of your preferences. The results, when published in The Flower Grower, will prove of assistance not only to the prospective purchaser, but to the nurseryman who must always consider for what varieties there will be a demand. Introductions since 1916 have been purposely omitted as probably they are not generally distributed, but any additional comments on these, or in fact upon old varieties not included in this very brief list, will be appreciated. Often an old practically unknown variety remains a personal favorite, knowledge of which one would like to share with others. As few of you may reply to this symposium it did not seem wise to devote much space to it, but your reasons for decisions sent in on a separate sheet would be appreciated.

We will use the simplest system of scoring; viz. the numbers 1, 2, 3, and 4, the highest denoting your special favorites, the lowest those not worth growing. In so limited a list I expect few discards, many marked 2 (indifferent) or 3 (good) and comparatively few 4 (fine).

Remember. First, that even if you know only a few varieties your opinion is worth something, and second, that if it is of value (and it is) there is no time like the present so that we can compare notes. The detached sheet should be forwarded to R. S. Sturtevant, Wellesley Farms, Mass.

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VARIETIES REGISTERED IN THE FLOWER GROWER

August to December 1920 issues inclusive)

Alhambra, a richer, deeper Sherbert. Grace Sturtevant.

Black Midget, a black purple dwarf. Mrs. E. P. McKinney.

Brandywine, B. H. Farr.

Colonial Dame, a deeper Nuee d'Orage. Mrs. E. P. McKinney.

Couleur de Rose, Japanese. Mrs. Francis Cleveland.

Dusk, a blend of size and height. B. Y. Morrison.

Dusky Prince, B. H. Farr.

Fenella, a floriferous white. B. Y. Morrison.

Firmament, a larger, richer Fritjof. richer Fritjof. H. W. Groschner.

Frank H. Thomas, cream with delicately tinted S. Twin Larches Nurseries.

Georgia, B. H. Farr.

Glee, dwarf, early yellow. Mrs. E. P. McKinney.

Harriet Presby, a violet of height. Frank H. Presby.

Her Rival, Her Majesty with more yellow. Mrs. E. P. McKinney.

Inner Glow, cream with yellow beard. G. Sturtevant.

Insulinde, large, velvety lavender bi-color. E. H. Krelage.

Lurline, early light mauve, 40 in. A. J. Bliss.

Magnificent, H. M. Minneapolis, 1920. W. E. Fryer.

Marion Mohr, an unusually long, delicate blue-lavender. Wm. Mohr.

Mary Orth, B. H. Farr.

May Morn, opalescent yellow. Mrs. E. P. McKinney.

Moonlight, a yellow pallida. Grace Sturtevant.

Mountain Maid, a good sized pink. Mrs. E. P. McKinney.

My Lady, lavender and white. Mrs. E. P. McKinney.

Old Ivory, a buff pallida. Grace Sturtevant.

Orchid, pale yellow flashed with purple. J. Marion Shull.

Peach Blow, Mrs. Francis Cleveland.

Pensamiento, Perfection type. J. Marion Shull.

Phyllis, lilac and mauve. E H. Krelage.

Piquante. lilac pink plicata. Mrs. E. P. McKinney.

Polaris, a 4 ft. violet self. Grace Sturtevant.

Primrose, a bright yellow self. Grace Sturtevant.

Queen of the Blues, tall lilac blue self. E. H. Krelage.

Regale, 40 in. clear lavender blue. Mrs. E. P. McKinney.

Seminole, H. M. Philadelphia, 1920. B. H. Farr.

Semiramis, pearl grey and reddish violet. E. H. Krelage.

Simplicity, white with pink style-branches. Mrs. E. P. McKinney.

Soubrette. Mrs. Francis Cleveland.

Solana, yellow and chestnut maroon. J. M. Shull.

Taj Mahal, a white pallida 38 in. G. Sturtevant.

Tamar, a rich 45 in. lilac. A. J. Bliss.

Tintallion, delicate lavender, color deepens at tip of falls. Grace Sturtevant.

Twin Larches, a white plicata. Twin Larches Nursery.

Ute Chief, B. H. Farr.

Virginia Moore. H. M. Washington, 1920. J. Marion Shull.

Wedding Gown, ecru tints. Mrs. Wm. Crawford.

White Nymph, a flushed white. Mrs. E. P. McKinney.

Names Changed at request of Committee on Nomenclature.

Mandarin (formerly Grandee) Mrs. Francis Cleveland.

Aristocrat (formerly Grenadier) Mrs. Francis Cleveland.

Autocrat (formerly Isolda) Mrs. Francis Cleveland.

1 denotes discard; 2, indifferent; 3, good; and 4, fine.

A. E. Kunderd
Afterglow
Albatross
Albert Victor
albicans
Alcazar
Amas
Ambigu
Anne Leslie
Archeveque
Argus
Arnols
Assuerus
Aurea
Berchta
Black Knight (syn. Black Prince)
Blue Jay
Boismilon (syn. Du Bois du Milan)
Bridesmaid
B. Y. Morrison
Caprice
Carthusian
Caterina
Celeste
Chester Hunt
Clarence Wedge
Cleopatre
Comtesse de Courcy
Crusader
Dalmarius
Darius
Dawn
Dejazet
Duchess de Chateau-fort
Duc de Nemours
Dr. Bernice
Edouard Michel
E. L. Crandall
Eldorado
Erich
Fairy
Flavescens
Florentina
Foster's Yellow
Frederick
Fro
Gajus
Hebe
Hector
Her Majesty
Hiawatha
Hugo
Honorabile
Innocenza
Iris King
Iroquois
Isoline
Jacquesiana
James Boyd
Jeanne d'Arc
Juniata
Kathleen
Kharput
Kochii
Lady Foster
Lady Jane
La Neige
La Tendresse
Lent A. Williamson
Lewis Trowbridge
Lohengrin
Lord Grey
Loreley
Mme. Blanche Pion
Mme. Chereau
Mme. Pacquitte
Magnate
Ma Mie
Mandraliscae
Mary Garden
Mary Gray
Massasoit
Mercedes
Merlin
Minnehaha

Miriam
Miss Willmott
Mithras
Monsignor
Mrs. Alan Gray
Mrs. G. Darwin
Mrs. H. Darwin
Mrs. G. Reuthe
Mrs. Neubronner
Mt. Penn
Navajo
Neglecta
Nibelungen
Nine Wells
Nokomis
Nuee d'Orage
Opera
Oriental
Oriflamme
Othello
pallida Dalmatica
Pancroft
Parc de Neuilly
Parisiana
Patience
Pauline
Paxatawny
Perfection
Pfauenauge
Plumeri
Pocohontas
Powhatan
Primier
Princess Victoria Louise
Prosper Laugier
Purple King
Quaker Lady
Queen Alexandra
Queen Caterina
Queen of May
R. C. Rose
Red Cloud
Rhein Nixe
Ring Dove
Rose Unique
Shelford Chieftain
Sherwin Wright
Shrewsbury
Swatara
Tamerlane
Tecumseh
Teresita
Thorbeck
Tineae
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